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MOTIVATION OF SPEECH AND HEARING HANDICAPPED CHILDREN.

BY- SIEGENTHALER, BRUCE M.   GERSTMAN, HUBERT L.
PENNSYLVANIA STATE UNIV., UNIVERSITY PARK

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AN ANALYSIS WAS MADE OF CHILD MOTIVATION IN STRUCTURED SPEECH AND HEARING THERAPY BASED ON THE ASSUMPTION THAT CHILDREN WHO NEED THIS TYPE OF HELP HAVE A CONSCIOUS DESIRE FOR IMPROVEMENT. PERTINENT LITERATURE WAS SURVEYED TO ESTABLISH A LISTING OF COMMON MOTIVES, DESIRES, AND NEEDS OF PEOPLE, AND A MOTIVATIONAL PREFERENCE EXAMINATION WAS DEVELOPED. THIS WAS ADMINISTERED TO OVER 400 CHILDREN IN 2 GROUPS, THOSE HAVING HANDICAPS IN HEARING AND SPEECH AND THOSE WHO WERE NORMAL. EACH CHILD WAS ASKED TO RANK SEVERAL MOTIVATIONS (ITEMS) TO MEASURE HIS INTEREST IN IMPROVED SPEECH AND OTHER BASIC MOTIVATIONAL GOALS. ANSWERS FROM EACH SUBJECT WERE THEN GROUPED ACCORDING TO SEX, AGE, SPEECH, AND HEARING CATEGORIES, AND THE STANDARD MEANS AND DEVIATIONS BETWEEN AND WITHIN THE GROUPS WERE OBTAINED. NOT ALL THE CHILDREN SAMPLED SHOWED THE DESIRE FOR BETTER SPEECH AND/OR HEARING HIGH ON THEIR HIERARCHY OF MOTIVES. HOWEVER, THE HANDICAPPED CHILDREN GENERALLY RANKED THE HEARING OR SPEECH MOTIVES VERY HIGH WITH RESPECT TO THEIR INDIVIDUAL AREAS OF DEFICIENCY. FURTHER STUDY OF MOTIVE PATTERNS WAS RECOMMENDED IN ORDER TO BUILD A WORKABLE RELATIONSHIP BETWEEN THE MOTIVES OF THE INDIVIDUAL CHILD AND HIS NEED FOR SPECIAL THERAPY. (JH)

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The Pennsylvania State University
Speech and Hearing Clinic
University Park, Pa.
June 30, 1960

MOTIVATION OF SPEECH AND HEARING HANDICAPPED CHILDREN

Project Director: Bruce M. Siegenthaler, Ph.D.

Research Assistant: Hubert L. Gerstman, M.Ed.

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Project Director: Bruce M. Siegenthaler, Ph.D.
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Speech and Hearing Clinic
University Park, Pennsylvania

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Preface

In the past speech pathologists and therapists have made important strides forward in developing techniques for treating the speech and hearing handicapped. However, often these techniques have had to do largely with methods specific to reducing stuttering blocks, correcting specific articulatory errors, reducing nasality, and so forth. Although there has been much interest expressed in such matters as the motivation of the patient being treated, this aspect of therapy has not received the research effort applied to other aspects of the therapeutic process.

The research reported herein was undertaken in accordance with a contract with the U.S. Office of Education and as outlined in the appendix to the contract (Cooperative Research Project No. SAE-8173). This research was intended as a systematic first approach to the study of motivation in speech and hearing handicapped school children and a control group of normal children.

Acknowledgment is hereby given to the assistance to this project by the consultants Dr. Alberta Siegel, Associate Professor of Child Development, Dr. John Hall, Professor of Psychology, and Dr. Eugene McDonald, Professor of Speech and Speech Education (all at The Pennsylvania State University).

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CHAPTER I

INTRODUCTION

Educational Context

In the current concept of education it is usually taken as truism that learning proceeds most effectively when motivation is high. In 1913 Dewey (1) pointed out that when pupils are doing things that they are interested in they are happier, they learn more, they become better adjusted in their personal relationships, and there is a decrease in the emphasis needed on discipline. The adherence to this principle is evident in the design of reading materials intended to motivate children to carry on learning efforts. Such materials are intended to be at the child's level of interest and experience and related in significant ways to his daily life. Thus, the teaching materials are meaningful, useful, and facilitate the gaining of new insights, information, attitudes and skills.

Concurrently the knowledge, skills, attitudes and manners of the teacher are considered vital to the pupil's learning. Thus, the professional education of teachers includes emphasis on knowing and understanding the interests and developmental patterns of children so that the teacher may use the available teaching materials most effectively, may devise his or her own teaching materials to suit the particular pupils at hand, and put into practice educational procedures which most effectively facilitate learning (2).

The public schools of the United States conceive as their mission the education of all children able to learn. The goals of this education are said to be:

economic sufficiency
civic responsibility
self-realization
social competence (3).

If these goals are to be realized for all children, those pupils who are exceptional (that is, who need educational handling which differs in some significant way from the basic general education program offered by the school system) will need special programs or procedures specific to their special problems.

At the secondary school level the comprehensive high school attempts to provide a broad, basic general education for all pupils, specific vocational training for pupils who will terminate formal educational experience upon leaving the school, and education in English, languages, mathematics, sciences, and the humanities for pupils expecting to attend college (4). If the comprehensive secondary school is to realize its goals it too must provide services, training, facilities and qualified teachers to provide for needs of pupils considered to be exceptional.

Among the total body of exceptional children are the speech and hearing handicapped. This group has been estimated to comprise about 5% of the school population (5). Thirty-nine of the states have regulations which certificate teachers to give remedial speech and hearing training in the schools (6), and other states recognize that special academic preparation is necessary for teachers who provide therapy to these children. State governments also frequently provide financial support to local school districts for the employment of one or more speech and hearing therapists. In addition to the effort for speech and hearing handicapped children carried on by the public schools, such children also are given training in clinics, hospitals, residential special schools, and camps by such organizations as Societies for Crippled Children and Adults, United Cerebral Palsy, local service organizations, chapters of the American Hearing Society and Junior Leagues. There also is a growing private practice among speech and hearing therapists. In sum, not only is there an important segment of the child population with speech or hearing disorders receiving remedial treatment in the public school and through other facilities, but there also are very considerable private and public funds being spent annually for the treatment of these children.

In any remedial activity carried on in the schools it is important that the therapy be the most effective possible. Effective therapy depends in part upon teaching materials and methods which guide the child through a program resulting in improved communication abilities.

However, (and the following point is of vital importance to any consideration of corrective speech and hearing therapy) the process of speech and hearing therapy is basically different than the ordinary classroom activity. In comparison to the regular classroom situation, speech and hearing therapy is much more highly individualized. The many nuances of individual differences play a much greater role in the therapist's handling of the individual child, whether he be in an individual treatment session or in a group of speech and hearing handicapped children. The therapist must give greater attention to the learning of new skills and attitudes which depend to only a relatively small extent upon the acquisition of additional information or facts on the part of the pupil being treated. Understanding the "psychology" of the pupil is important to the classroom teacher, but such understanding is of even greater importance to effective speech and hearing therapy. Thus, while techniques or routines for treating articulation cases, stutterers, the hard of hearing, and so forth may be mastered by the therapist, mastery of techniques alone is not sufficient for a speech and hearing therapist to be effective. And if his understanding of the speech and hearing handicapped child includes only some information as to types of communication disorders, some methods for treating the symptoms of these disorders, and perhaps some information regarding the growth and development of children, together with a skill in integrating his efforts into the over-all school program, the therapist should be considered inadequately prepared for the practice of his profession.

Problem Area and General Approach

Speech therapists are acutely aware that a continuous problem in giving speech and hearing therapy to school children is motivation. While some children seem to have well defined needs for improved communication skills and enter eagerly into the therapy situation, others seem to have only vague or non-existent feelings of discomfort about their speech. This suggests that for many speech and hearing defective children the paramount needs or desires are other than for speech or hearing, and that for at least some children the speech therapy session fulfills no real need other than to be a pleasant place to spend a half-hour. Thus, the assumption that the child with a speech or hearing problem ipso facto has a primary desire for speech improvement is open to question, as is the structuring of teaching sessions based on this assumption.

The problem of motivation is especially critical in the public school speech correction program. Typically, the therapist sees a child, usually as a member of a group, for a one half-hour (or less) period per week. Because of the therapist's full schedule (frequently it includes therapy for over a hundred children per week) therapy sessions are planned in advance, and usually these plans are in the form of specific speech activities.

Textbooks in the field discuss the importance of motivating children, and frequently suggestions are given for stimulating interest in speech and hearing improvement. However, the speech pathology and audiology literature is void of systematic investigation of the interests, needs, or desires of the speech and hearing handicapped, and the usual motivational techniques are based on the assumptions regarding the play interests of the children and do not have experimental evaluations of the techniques.

Understanding the interests of children in speech and hearing corrective classes is basic to understanding handicapped children, to planning effective remedial speech and hearing help for them, to the training of future teachers of such children, to the evaluation of therapy given in the schools, and to the extension of knowledge about the speech and hearing handicapped child.

Although interested in the motivation of their patients, speech therapists have made relatively little progress in investigating (on other than relatively superficial levels) this important area. It recently has been stated, "... an integrative method on measuring motivational variables is still lacking as is a clean-cut method for investigating origins of such variables" (7, p. 15).

The present study was designed to investigate systematically motivation in children who need speech and/or hearing therapy and to compare their motivational preferences with normal children.

The basic approach was to review available literature regarding types of drives, needs or motives, to develop a test (Motivation Preference Test) to measure the relative strength of nine pertinent and important motives among children ten to eighteen years of age, to give the Motivation Preference

Test to children (normals, and speech and hearing defective), and to make statistical comparisons among subject groups and sub-groups regarding the motives considered.

CHAPTER II

LITERATURE RELATED TO MOTIVES AND THEIR THERAPEUTIC IMPLICATIONS

Literature

The rehabilitation literature contains a few examples of consideration of motivational problems among the handicapped (generally non-experimental and not specific to the speech handicapped). For example, Schoick (8) pointed out that success of a rehabilitation program depends upon satisfying the desires for personal recognition, intimate response from others, a variety of experiences and security. Garrett and Myers (9) indicated that many handicapped persons reject rehabilitation measures because to be rehabilitated means to face reality and to become independent, which is feared by the handicapped individual. The need to feel superior in the handicapped was mentioned by Alger and Rusk (10) as a block to rehabilitation because to be subjected to rehabilitation means to some individuals to be degraded. It also has been indicated by Phillips (11) that patients may set excessively high goals for themselves as a defense against the necessity to be independent agents--the patient fears he will fail in the real world. All of the above patterns of behavior can be observed readily in a rehabilitation program setting which includes speech and hearing therapy. A further clinical impression is that patients who become adventitiously handicapped tend to demonstrate higher levels of motivation in their therapy than do the congenitally handicapped. Apparently the adventitious case has an experience of normalcy which he wishes to regain, while the congenital case lacks such an experience of normalcy as a motivating base in his therapy.

Motivation and motives have been defined in a variety of ways:

> Some psychologists stress the conscious experiences of desire, goal awareness, and pleasant and unpleasant feelings. Others rely upon the objective facts of human and animal behavior, which they explain by reference to bodily processes, thus resolving the study of motives to a branch of physiological psychology. Again some currents in the stream of thought move toward a biological explanation of behavior, others toward interpretation in terms of social factors. Some move toward environmentalism, others toward explanation in terms of heredity (16, p.401).

Lewin (15), in his "Field Theory of Psychology," gave considerable importance to conscious motives. In the theory motivation is centered on "need" (what others call wishes, drives, motives or urges). Lewin distinguished three states of needs: hunger, satiation and over-satiation. These states correspond to a positive, neutral and negative

valence of the activity (related to a particular need).

Although much of the behaviorist and physiological-psychological study of motivation has concerned itself with animal experimentation which may appear trivial and irrelevant, such research can contribute to the understanding of human motives (12). Hull (17) developed concepts of motivation on the basis of O variables (factors within the organism such as hunger and expectation of punishment) and A variables (antecedent variables such as duration of hunger, not controlled by O variables). Most animal experimenters use the concept of homeostasis which implies that physiological processes strive to maintain the equilibrium in the organism. A state of physiological disequilibrium can be considered to produce drives or motives in the organism, and because of the physiological basis for motives, animals (including man) have an internal and continuous source of motivation.

Writers as far back as Aristotle wrote on hedonism as motivating behavior. While writers have differed as to application of hedonism, they have regarded the major source of human activity to be a self-interested desire to seek comfort and pleasure and to avoid discomfort and pain (18). Freud believed that sex, self-preservation, and

Thanatos (a death instinct) were the prime motivating forces of man's behavior. He recognized the essentially goal directed quality of human behavior based on a principle of homeostasis (Freud's pleasure-pain principle) (19). Jung and Adler, while emphasizing instinctual behavior, differed with Freud as to which instincts were of primary importance (19). The needs of nutrition and gregariousness were Jung's choices, whereas Adler stressed the drive for power (i.e., superiority).

Speech pathologists frequently give attention to the motivation problem in their patients. For example, Van Riper stated:

> One of the first causes of delayed speech which the speech correctionists look for in the child of less than six years of age is that of lack of motivation. Children will not learn to talk unless they realize the utility of speech. The law of least effort is a rather fundamental determinant of human effort, and when children can get their wishes fulfilled without employed speech, they never acquire this all-important tool (20, p. 138).

To many in the speech field, motivation is the means by which a pupil (patient) can be induced to participate in speech habilitation. Thus,

> Remedial work will proceed more rapidly when well motivated. In work with small children, speech games may serve as a means of interest. Adults work best when there is a special reason for doing so (21, p.197).

Wepman, (22), in a discussion of the basis of learning, paraphrased Prescott by pointing out that for learning such as required in speech therapy to take place the individual must obtain satisfaction of (a) physiological needs, (b) social needs, and (c) ego and integrative needs.

In a recent paper, Raph stated the need to

> . . . shift the focus in speech therapy from a teacher-centered orientation of motivation to a consideration of certain values and attitudes present in a child's motivation for learning. . . . What can easily be regarded as a child's determination to improve his speech may actually represent a need for approval to enhance his sense of worth, or a drive for mastery, or a pattern of affiliating with an authority figure as a means of maintaining security. . . . Care must be taken that the child has opportunity to develop a sense of esteem for himself not entirely rooted in the opinions of others. . . (7, p. 15).

That is, speech therapy is a process highly dependent on personal needs of the patient, and not dependent on needs of the therapist projected onto the patient.

Although speech therapists are concerned with motivation, the speech literature does not contain clinical or theoretical attempts to describe motives specific to speech patients, other than on a superficial level. This is despite the often stated necessity for considering the motivation of patients and despite the common concept of treating the "whole" individual. Speech pathologists may profitably look to other fields which have been concerned with motivation in order to begin to build theoretical and practical concepts regarding motivation among their patients.

The psychological literature contains a body of material dealing with personality theory, and with concomitant motives, desires, drives, or basic needs.* Schutz (23) proposed a theory of personality requiring only the interpersonal needs of inclusion, control, and affection. Fromm (24) listed five specific needs presumed necessary to understanding man's psyche. Horney (25) described motivation in terms of basic modes of movement relative to others: moving toward, moving away from, and moving against. Sullivan (26) proposed only two major types of motivating forces--satisfaction (bodily) and security (interpersonal). Maslow (27) developed a theory of personality which included seven motivating needs and which outlined the principles for the selection of the motives mentioned. Symonds (28) suggested that the fundamental characteristics of adjustment were determined by drives toward success, the familiar, and new experience, and that at least nine drives were derived from these three. McClelland wrote or edited a number of articles and books (e.g., 29, 30) related to the achievement and other motives. According to Murray (31) there are at least twenty basic needs which are related to theory of personality.

---

*Although a procedure of the present study was to survey available literature in order to obtain statements of motives, the obtained list will not be presented here. Most of the authors surveyed have been mentioned earlier or will be mentioned in the following, but the motives, needs, and so forth proposed by them are indicated in Appendix A.

Some Clinical Aspects

In a therapy clinic a knowledge of motivation can play an important role. Goal seeking behavior may be directed or possibly be created by the therapist, and the diagnostician and/or therapist must be sensitive to motivational factors in the patient who seeks help.

According to Allport (13) motives are contemporary (that is, whatever drives must be effective currently and related to present goals); motives alter radically from infancy to maturity (we should speak of adult motives as supplanting the motives of infancy); and the maturity of personality is indicated by the degree of functional autonomy motives have achieved (even though there are infantilism, regressions, reflex-responses, etc.). Learning in diversified environment acts upon divergent temperaments and abilities to create individualized motives. Speaking from the standpoint of a psychological therapist, Rogers contended that effective therapy is dependent on reorganization of self, and that there is a tendency toward the maintainence and enchancement of the organism and of the self. This tendency provides the motive force for patients engaged in the Rogers type of therapy. He also indicated that

> . . . in this concept of motivation all the effective elements exist in the present. Present tensions and present needs are the only ones which the organism endeavors to reduce or to satisfy. While it is true that past experience has certainly served to modify the meaning which will be perceived in present experiences, yet there is no behavior except to meet a present need (32, p. 491).

Varying levels of motivation should be considered. Long term and short term goals should be differentiated, as should different intensities of motivation. Thomson discussed intensity and duration of a motive as follows:

> The intensity and duration may vary and have no necessary connection. An intense motive, as in appetite, may be of short duration. It may reach the goal quickly, while a relatively weak motive, if thwarted, may keep the person under tension for a much longer period, as in the case of a personal slight which may eventuate into a case of "harboring" a grudge. As a rule, the long-sustained motive grows in intensity and may reach the proportions of a master motive, dominating, controlling, directing, and modifying all the other desires and incentives of the individual (14, p. 311).

Since the Rogerian school of thought has its basis in the so-called "self system," a counselor encourages the client to formulate and work toward an ideal of self-worth. This encouragement and the end goal of the therapist, may be to set up a motivational pattern in which the client moves toward a reorganization of behavior. If the speech therapist recognizes that he treats the whole person, he may use the client-centered approach in such a way as to foster the tendency toward total reorganization as a long-term goal, with improved speech skills as a relatively short-term or less inclusive goal which contributes to the larger goal.

In the area of clinical speech there is general recognition that motivation of the patient plays a vital role. The discussions usually may be put into one of two categories: importance of considering the needs or motives of the patients, and specific techniques intended to "motivate" the patient (usually orientated toward children).

Representative discussions of motivation on the level of the first category are found in a number of places:

> . . . at no time should the child be permitted to feel that there is more value in not talking than in talking.
>
> Caution should be exercised in motivation, and expectations should not exceed the child's capabilities.
>
> The use and intension of verbal speech should be nurtured by appropriate

> rewards and encouragement. The child should be made to feel that oral speech is worthwhile because it has greater value to him. Thus the child will be motivated to use it as much as he can (33, p. 275-276)
>
> Speech improvement, therefore, should be taught in such a manner that it helps the child attain a level of speech competence sufficient to satisfy his physiological as well as his physical needs for emotional release (34, p. 4).

Johnson, Brown, and others (35) indicated that when giving speech or hearing therapy, speaking should be enjoyable, satisfying, and rewarding for the child. Likewise, Irwin (36) indicated that to be effective the therapist-teacher should see the world from the child's viewpoint and to try to satisfy his interests and needs. Irwin listed interests at various age levels, but these are in terms of general levels of development and are not individualized for specific children.

Backus and Beasley (37) considered the goal of the therapist to be helping the child to change interpersonal relationships to a level of greater adequacy in terms of satisfactions and security. Therapy goals should be structured differently for different patients (even for those within the same therapy group) and goals for the same individual should be structured differently at different stages of therapy. They also indicate that:

> The person's needs play a decisive part in determining his pattern of

> functional organization. These needs as previously pointed out are related to satisfaction of bodily requirements--of which belongingness has most importance for our purposes in speech--and to security or culturally induced satisfactions.
>
> We should distinquish sharply between the person's own needs and those which someone else, especially teacher or parent, thinks he ought to have. For example, a speech therapist may think that a child ought to have a need for more intelligible speech, especially if the child becomes angry when he is not understood; yet that child's own need may consist almost wholly of struggling against parental domination. This need may be so potent that certain aspects of speech training should be delayed until it has been met to some degree (37, p. 23).

These authors felt that it is possible to induce needs (they suggest, for example, the possibility of creating a need to gain recognition on the part of a child who previously needed to remain in the background), and summarized their discussion of this area by indicating that knowledge of the individual patient's functional organization is of utmost importance for speech therapy.

More recently, Beasley (38) indicated that speech handicapped children have the same needs (for affection, attention, freedom, independence and security) as normal children. According to her, the teacher should appraise the interests, attitudes, and motivations of the child, for learning depends upon the child's present needs. She also discussed some implications for therapy in terms of assessing the child's current needs and making immediate adjustments in the therapy plan for the therapy session (39), and suggested that the motivating attitudes and needs may have their origins early in the child's life and may not easily be discernable because of their obscure (to the therapist) source (7).

The foregoing demonstrates an acute awareness by speech pathologists and therapists of the place of motivation in the therapeutic process. However, with the exception of occasional case studies or presentations, the therapist largely is left to his own devices to assess the motivational forces within a given patient. Psychological testing may be mentioned as a technique for gaining insight into the dynamics of a patient, but more often acute clinical observation by the therapist apparently is the method for gaining this insight. However, even if the required degree of acuteness of observation could be gained by all therapists, the necessity of interpreting the observed behavior remains. Because the professional preparations of a speech therapist includes blocks of work in psychology, apparently it is assumed that this training will prepare him to make accurate, cogent and adequate assessments of his patient's motivations.

At the second level or category of discussion about motives in the speech literature is the presentation of specific materials intended to motivate children to work on their speech, or at least to participate in therapy lessons. Such materials seem to have their place in the practice of clinical speech and often are used extensively, especially in public school programs.

Representative of this type of materials are those by Ainsworth (40), Chapin and Lundin (41), Scott (42), Scott and Thompson (43), and Raaf (44). In general, these materials are in the form of games, activities, stories, and poems which may be useful to the therapist in the carrying on of daily speech therapy. (However, another form of lesson plan material intended to be related more directly to the child's needs, motives, and daily speech usuage is that which utilizes conversational speech patterns orginating within children. See Backus and Beasley (37) for development of this type of material.)

Conclusion

As a result of the preceding review of literature it is apparent that the area of motivation is of major interest to students of human behavior. Individuals in the field of psychology have developed a variety of concepts of the place of motivation (need, goal, drive, etc.) in behavior and many have prepared lists of the motives which stimulate human behavior. It is well recognized by speech pathologists and therapists that because they deal with human behavior the motivation of their patients is important to successful therapeutic efforts.

Authors of manuals and professional articles in speech pathology and therapy commonly discuss the importance of considering the motivating forces in patients but give little to guide the therapist for assessing or interpreting the motives of patients. The speech therapy literature also contains numerous materials "to motivate" patients (especially children) in speech therapy. Usually, this type of material is in the form of games and activities designed to interest school age children, and is designed for various age groups. Although the authors of the materials may indicate that specific items may be selected according to the interests and needs of individual children, usually the instructions do not guide the therapist directly in assessing the motivational interests of patients.

The present study accepted the concepts that motivations are important, that they are not the same for all people, and that they should be assessed and taken into account when doing speech therapy.

Although the present study deals primarily with groups of children and differences or similarities in their motivational patterns, it is conceived as a first step in a program of research leading to development of a motivational test measure, and to concepts of utilizing motivational patterns in speech therapy programs. Thus it is intended that the present study (and others) will be relevant to what appears to be an unexplored area between the recognized need to consider motives of speech patients and the provision of specific devices "to motivate" them.

CHAPTER III

PURPOSE OF PRESENT STUDY AND METHODS AND PROCEDURES

Statement of Purpose and Hypotheses

The purpose of this research was to investigate systematically the motivational preference* of groups of speech and hearing handicapped children and of a sample of normal children. In order to carry out this purpose the following specific hypotheses were tested:

(1) There is significant agreement (.05 level) in the ranking of nine motivation areas by subjects within each subject group and subgroup.

(2) There are significant correlations (.05 level) between the ranking of motivation areas by pairs of subject groups and subgroups.

(3) The need for good speech and/or hearing is ranked no higher than fourth among the nine motivation areas considered by the various subject groups and subgroups.

In addition, the predominate expressed motivational needs among a group of nine motivation areas were found for speech and/or hearing handicapped children and for normal children.

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*The term "motive" will be used hereafter to be synonymous with drive, need, desire, or other terms having similar general meaning.

Methods and Procedures

The method of proceeding can be considered in three major stages:

Selection of motivation areas to be considered
Development of a Motivation Preference Test
Administration and scoring of the Motivation
Preference Test.

Each of these major stages will be described below according to the sequential steps followed for its completion.

Selection of motivation areas to be considered

I. Cataloguing of motives

A. The literature was searched extensively for lists or statements of human motives; each motive mentioned was noted.

B. The motives were categorized into areas by grouping the various terms used for similar motives by different authors. Thirty-six different areas were found. Each was given an identifying name.

C. The thirty-six motive areas were divided into two groups: Primary or Basic Motives, and Secondary, Derived, Acquired, or Learned Motives.

D. Primary or Basic motives were rejected from further consideration because they were recognized as being on a physiological level and not appropriate for study at this time in the present context.

E. Secondary, Derived, Acquired, or Learned motives were retained for consideration.

F. Appendix A lists specific motives mentioned in the literature reviewed. After each is a number indicating its reference source. (References for items in Appendix A are given in the LIST of REFERENCES.) The identifying name for each motivation area is underlined in Appendix A.

II. Motivation areas utilized.

A. An evaluation was made of each motive area taking into account appropriateness and interest to education and lack of offensive quality. In view of a concurrent decision as to how to administer the test of motivation preferences (indicated below) the motives to be considered were limited to seven, plus Speech and Hearing. Appendix A indicates motive areas selected.

B. Each of the seven motives selected, plus Speech and Hearing (included because of their obvious interest to this study), was defined in terms of the literature giving each motive area. Appendix B gives each of the motive definitions.

Development of Motivation Preference Test

I. Originally it was planned to develop a single declarative statement relative to each of the motivation areas to be considered, to present the statements to the subject, and to have the subject rank the statements according to his preference order.

A. A pilot study was done to compare this procedure with a forced choice method using paired statements because subjects asked to do a simple ranking had some difficulty with the procedure. Appendix C indicates the procedure and results of this study. (At the time of the pilot study ten motive areas were being considered. One was later eliminated.)

B. The results of the pilot study indicated that the simple ranking method and the forced choice method gave results which were closely related as indicated by rho values for each of fourteen subjects, and by the rho value obtained when the average ranks from the two test methods across all fourteen subjects were used.

C. Subjective evaluation of the two procedures by the subjects and by the experimenter indicated that the forced choice method was preferred for ease of administering and taking the test (but not for test scoring).

D. On the basis of this pilot study the decision to use a forced choice, paired-comparisons test technique was made.

II. It was advisable not to measure the strength of a motive by only a single test item (statement).

A. It was recognized that a large number of items would be desirable for each motivation area, but it was also recognized that practical aspects of test administration placed a limit on the number of items that could be used.

B. The final decision was to use three test items (statements) for each of the nine motivation areas.

III. Potential test item-statements were collected and given an initial selection.

A. Fourteen persons knowledgeable with respect to children and motivation wrote declarative statements related to each motivation area. Appendix D briefly describes these contributors.

1. Each person was given the definitions of the selected motive areas (Appendix B).

2. Each wrote five to ten statements about each area with which a child 10 to 18 years could agree or disagree.

3. The 140 statements thus collected were collated.

B. The consultants and staff each independently evaluated the statements for:

Expression of the motivation area intended.
Suitable for children in terms of understanding.

1. They chose from the pool of statements for each motivation area the six statements considered "best" for purposes of this study.

2. The staff and consultants held a general discussion during which they collated their evaluations of the statements. The result was that for each motivation area five to nine statements were retained for further consideration because there was general agreement as to their suitability.

IV. The statements judged suitable by the above procedures were further evaluated as follows:

A. Fifteen children (ages ten to eighteen years; ten normal and five speech defective) were interviewed regarding each statement.

1. Each child was asked "What does this sentence mean?" They were also asked whether the sentence seemed to mean about the same as the other sentences in the motive group for which it was intended.

2. Statements were eliminated by this procedure to the extent that four to eight statements remained for each motive area.

3. Appendix E indicates the criteria used to eliminate statements and several samples of statements eliminated because of misunderstanding by the children interviewed.

B. The residual four to eight statements for the nine motive areas were given in random arrangement to a group of ten graduate students in clinical speech. These people also were given the definitions for the motive areas presented in Appendix B. They were asked to sort the statements into the motive area for which they believed it was intended. One statement was misplaced by one person; the statement was eliminated from further consideration.

(The intent of the procedures described this far was to accomplish the following: to obtain from the available literature those motives which are considered important to human behavior; to select those motives which have relevance to speech therapy; to select a group of motives so that the number considered would not be too great [nine motive areas, including speech and hearing]; to obtain a pool of statements relative to each motive area; to select those statements which were meaningful to children; and to verify the assignment of statements to motive areas.)

V. The residual statements (a total of fifty-four) were evaluated for intensity of expression.

A. Ten adults (five speech clinicians, two university teachers, three unsophisticated adults) and five normal adolescents were given the statements in their respective motivation groups. Their task was to rank the statements within each motivation area as to emotional tone or content. The following instructions read to each of these persons will illustrate the procedure followed:

> "Before you appear some cards on which statements are written about various topics. The statements are grouped by topic area so that each group may be sorted separately. Some groups of cards contain four statements, others five, some six, seven or eight. We are interested in finding which statements are the most intense or strongest. To find this out we are asking you to compare each statement with every other statement in the section. By the "intensity" or "strength" of a statement we mean the impact the statement carries as a result of its composition. I will shuffle the cards within each section. I will then hand you one card at a time which you will

compare with every other card in the section. Thus the first card I hand you will be considered the weakest until it is compared with the second card, and so on until we have a rank order for each section. If you feel a statement is of equal intensity to another statement, please try to make a choice between them. If this is not possible, place the two cards together and point this out as I record your ranking. We will do nine sections as I have just described. If there are no questions, we can begin."

B. Within each motive group the ranking of statements by the judges was noted, and Kendall Coefficients of Concordance were computed as indicators of the degree with which the judges agreed as to ranking of statements on the basis of emotional tone.

1. For the present purpose a coefficient of concordance significant at the .05 level was considered to be indicative of a strong systematic factor in the tone of the statements. That is, if the judges agreed as to ranking of emotional tone of the statements in a motivation area approximate equality of the statements in this respect was not demonstrated. However, if a non-significant coefficient was obtained, it was interpreted to mean that there was not a strong systematic element of emotional tone in the statements, that judges' rankings of statements were primarily on a random basis, and there was approximate equality among the statements.

2. The Kendall Coefficient of Concordance computed after the first ranking of the statement showed significant coefficient values in several of the motivation areas.

3. By inspection, those statements which were observed to be placed by the judges generally in either high or low ranked positions were eliminated.

4. The procedure of ranking was repeated, using the same judges, and coefficients of concordance were computed again. None was significant (none reached the .05 level).

5. On the basis of this procedure it was concluded that the residual statements within each motivation area were of approximately similar emotional tone.

VI. Selection of twenty-seven statements for the Motivation Preference Test.

A. From the group of remaining statements for each motivation area the three statements which had average ranks (over all fifteen judges as found above) at the middle of the ranking distribution were selected. Thus twenty-seven statements (three for each motivation area) were obtained.

B. Ten judges (three unsophisticated adults, three adolescents and four graduate speech clinicians) ranked all twenty-seven statements in order of emotional intensity for statement content. The following instructions read to the judges illustrate the procedure.

"I have here 27 cards which I would like you to rank by emotional intensity or as we say, "by strength of the statement." By strength of the statement we mean the impact a statement carries as a result of its composition. Think of three persons sitting in a room, each of whom wishes to become an airplane pilot. The first says, "I would like to become an airplane pilot." The second one says, "I want very much to become an airplane pilot." The third one says, "It is imperative for me to become an airplane pilot no matter what." If we were to judge which of these men wishes to become an airplane pilot most, merely on the strength of his statement, which one would you choose? This is the same problem we are facing in ranking these cards with one exception. We are comparing more than one motive or attribute. This is, we must think of a comparison more like, "I would like to become an airplane pilot" with "I want very much to become a truck driver." We have 27 statements, each of which represents a certain motive. Irrespective of the motive, our problem is to determine which statement has greater intensity. Please rank these 27 statements. If you feel there are statements of equal intensity, please make a forced choice. You may take any method to determine the intensity of these statements, so long as you keep in mind that we are interested in the emotional intensity of the statement and not in your personal reaction to the statement insofar as it directly affects you."

C. A coefficient of concordance was computed using the rankings given to all twenty-seven items by the ten judges. A W value significant at the .02 level was obtained and interpreted to indicate the presence of a factor which influenced the judges to rank the statements on a systematic basis.

D. Inspection of the rankings by individual judges indicated that a number of the statements were given consistently high or low rankings.

E. Those statements which were ranked consistently high were replaced by statements from the same motivation area (using the pool of items described above) but having lower mean rankings. Statements which were ranked consistently low were replaced by items from the same motivation area but having higher rankings according to the above. A total of ten statements were replaced by this procedure.

F. The new group of twenty-seven statements was presented as a total group to the same judges, and ranking was done again.

G. A coefficient of concordance was computed on this second ranking by the ten judges. The obtained W was .087; this value had a probability of between .50 and .70. On the basis of this finding it was concluded that statements in the present list of twenty-seven statements were not characterized by large differences in emotional tone or intensity.

VII. Formation of Motivation Preference Test.

A. The basic form of the Motivation Preference Test was three groups of nine statements each as determined by considerations such as length of test administration. Each group of statements contained one statement related to each motivation area. The three groups of nine statements were called sections I, II, and III.

B. For section I, the highest ranking statement in each of the nine motive areas was used. (The rankings were obtained by taking the average rank of each item across all judges participating in Item VI F above.) That is, for section I the highest ranking Speech statement was used, the highest ranking Hearing statement was used, the highest ranking Dominance statement was used, and so forth for the nine motivation areas. For section II, the second ranking of the Speech, the second ranking of the Hearing, the second ranking of the Dominance statements, and so forth were used. The remaining nine statements (third ranking for each motivation area) were used for section III. Appendix F indicates the statements used for each of the test sections and the motivation area for each statement.

C. Within each section of the test each statement was paired with each other statement. Thus there were 36 pairs of statements for each of the three test sections, and there were a total of 108 pairs of statements for the total test.

D. Using a technique of drawing numbers, the order of presenting each of the pairs of statements was determined by chance. (All 108 pairs of statements were scrambled.) For each pair of statements (test item) a table of random numbers was used to determine which of the two statements would be listed first. The resultant list of 108 test items was called Motivation Preference Test, Form A.

E. Form B of the test was created by completely reversing the order of statement presentation. That is, the second statement in Test Form A, item 108 was present first and paired with the first statement in Test Form A item 108. The second statement in Form A first item became Form B item 108 first statement, and the first statement in item one of Form A became the second statement in Form B item 108.

F. An appropriate cover sheet was prepared for each test form carrying the usual identification information for the subject taking the test. A second sheet was set up to carry three sample test items with instructions and appropriate blocks for recording test scores in terms of each motivation area for the three test sections as well as ranking of preference for statements (motivation areas) over the total test.

G. Forms A and B, with cover sheets, were reproduced by the off-set printing process.

H. Appendix G presents Form A with preliminary sheets.

Administration and scoring of the Motivation Preference Test

I. Approximately 200 normal children in the public schools of State College, Pennsylvania, grades 7 and 8 were given the Motivation Preference Test (about half were given Form A and about half were given Form B).

II. Approximately 60 normal children in the Bellwood-Antis Senior High School, Bellwood, Pennsylvania, were given the Motivation Preference Test (half Form A and half Form B).

III. Contacts were established with a number of speech and hearing clinics, public school speech correction programs, and other therapy programs relative to testing children having speech and/or hearing problems with the Motivation Preference Test. Appendix H shows the programs which cooperated in this data collecting. About half of the test papers were Form A and half were Form B.

IV. When administering the tests the only instructions were to use children ages ten to eighteen years of age with speech or hearing problems. Children who could not read adequately or did not seem to understand the test items or procedures were not to take the test (unless the test administrator could overcome the difficulty with a small amount of help).

V. Children taking the test were instructed to check the statement in each pair of statements which was most true for them.

VI. A total of 425 Motivation Preference Tests were obtained (about half Form A and half Form B) on speech and hearing defective children.

VII. A suitable scoring procedure was devised so that scoring of test responses could be somewhat facilitated. Scoring was in terms of the number of times each statement (motivation area) was preferred over each other statement (motivation area). That is, for section I Speech was paired with each of eight other motivation areas, Hearing was paired with each of eight other areas, etc. By scoring for the number of times Speech (for example) was preferred over the other statements, and by scoring for the number of times Hearing was preferred over the other areas, and so forth for all areas, the preference ranking for the nine motivation areas could be obtained for a child. The rankings of motivation areas were also obtained for sections II and III. By summing the number of times each motivation area (statement) was preferred over each other area for the entire test, a measure of motivation preference was obtained. These preferences were ranked one through nine for the child; the rankings given the nine motivation areas by subjects became the raw score data for this study.

CHAPTER IV

RESULTS AND ANALYSIS

Results

After scoring the Motivation Preference Test papers of the normal and of the speech or hearing defective subjects and obtaining the rankings of the nine motivation areas for each subject, the subjects were grouped according to speech, hearing, age and sex categories. The mean ranking of each motivation area and the standard deviation of ranks by subjects in each group or subgroup were obtained. Tables 1-5 show these data. (Children over ten but under fourteen years of age were placed in the younger group; children fourteen and over but under nineteen years of age were placed in the older age group.) It was assumed that Form A and Form B of the Motivation Preference Test were equivalent. Results from both forms were pooled.

Analysis

Analysis related to hypothesis one

The first hypothesis under test stated: There is significant agreement (.05 level) among the ranking of nine motivation areas by subjects within each subject group and subgroup. To test this hypothesis Kendall Coefficients of

Table 1. Mean Ranks and Standard Deviations (in parentheses) across Normal Subject Subgroups for Nine Motive Areas.

		Motive Areas								
Group	N	Speech	Hearing	Group Affiliation	Independence	Security	Achievement	Intimate Personal Relation.	Personal Recognition	Dominance
All Normals	285	5.95 (2.29)	5.94 (2.22)	3.68 (1.89)	3.08 (2.16)	5.71 (2.07)	4.61 (2.07)	3.61 (2.11)	4.59 (2.29)	7.96 (1.01)
Male, 10-13	85	5.91 (2.47)	6.02 (2.13)	4.14 (2.03)	3.29 (2.29)	5.95 (1.52)	4.31 (2.09)	4.36 (2.07)	4.15 (2.47)	7.32 (2.26)
Male, 14-18	46	5.99 (2.04)	5.79 (2.35)	4.13 (1.98)	2.55 (2.26)	6.53 (1.94)	3.77 (1.82)	3.84 (1.99)	4.57 (2.11)	7.83 (1.67)
Fem., 10-13	96	6.33 (2.27)	6.17 (2.05)	3.07 (1.61)	3.47 (2.13)	4.99 (2.34)	5.03 (2.15)	3.22 (1.96)	4.44 (2.06)	8.27 (1.65)
Fem., 14-18	58	5.34 (2.10)	5.54 (2.43)	3.66 (1.74)	2.52 (1.70)	5.91 (1.97)	5.01 (1.80)	2.98 (2.11)	5.48 (2.27)	8.53 (0.75)
All Male	131	5.94 (2.33)	5.94 (2.15)	4.14 (2.00)	3.03 (2.29)	6.16 (1.62)	4.12 (1.98)	4.18 (2.06)	4.30 (2.41)	7.50 (1.93)
All Fem.	154	5.95 (2.51)	5.93 (2.24)	3.29 (1.66)	3.11 (2.01)	5.34 (2.22)	5.02 (1.99)	3.13 (2.12)	4.83 (2.18)	8.36 (1.09)
All, 10-13	181	6.13 (2.37)	6.10 (2.09)	3.57 (2.82)	3.39 (2.22)	5.44 (1.96)	4.69 (2.13)	3.76 (2.02)	4.30 (2.26)	7.87 (1.98)
All, 14-18	104	5.63 (2.10)	5.65 (2.42)	3.87 (1.73)	2.53 (1.94)	6.18 (1.97)	4.46 (1.80)	3.36 (2.07)	5.08 (2.21)	8.22 (1.29)

Table 2. Mean Ranks and Standard Deviations (in parentheses) across Stuttering Subject Subgroups for Nine Motive Areas.

Group	N	Motive Areas								
		Speech	Hearing	Group Affiliation	Independence	Security	Achievement	Intimate Personal Relation.	Personal Recognition	Dominance
All Stutterers	121	2.54 (2.46)	6.02 (2.35)	4.55 (2.44)	3.44 (2.28)	6.06 (2.25)	5.39 (2.10)	4.12 (2.28)	5.24 (1.79)	7.63 (2.07)
Male, 10-13	53	2.47 (2.15)	5.52 (2.54)	4.66 (1.87)	3.57 (2.44)	5.56 (2.49)	5.35 (2.26)	4.87 (2.19)	5.29 (1.94)	7.67 (1.92)
Male, 14-18	41	2.46 (1.63)	6.97 (1.82)	4.26 (2.46)	3.39 (2.24)	6.73 (2.08)	5.15 (1.94)	3.76 (2.10)	5.54 (1.98)	7.91 (1.69)
Fem., 10-13	16	2.62 (3.73)	5.72 (3.50)	4.94 (1.91)	3.65 (2.20)	6.00 (1.58)	6.25 (1.94)	3.91 (2.45)	4.88 (2.47)	6.97 (2.93)
Fem., 14-18	11	3.23 (2.65)	6.14 (2.55)	4.91 (1.45)	3.00 (1.53)	6.68 (1.81)	5.73 (1.77)	2.36 (1.48)	4.96 (0.94)	8.09 (2.27)
All Male	95	2.42 (1.98)	5.99 (2.41)	4.39 (2.11)	3.31 (2.39)	5.94 (2.41)	5.15 (2.07)	4.30 (2.18)	5.28 (1.91)	7.61 (1.74)
All Fem.	27	2.87 (3.11)	5.89 (2.98)	4.93 (1.62)	3.39 (1.96)	6.28 (1.63)	6.04 (1.89)	3.28 (2.12)	4.91 (2.00)	7.43 (2.70)
All, 10-13	69	2.47 (2.41)	5.46 (2.76)	4.66 (1.89)	3.54 (2.41)	5.58 (2.12)	5.48 (2.19)	4.58 (2.23)	5.12 (2.03)	7.40 (2.18)
All, 14-18	52	2.58 (1.89)	6.65 (1.94)	4.32 (2.21)	3.24 (2.08)	6.60 (2.12)	5.17 (1.91)	3.39 (1.86)	5.31 (1.49)	7.80 (1.96)

Table 3. Mean Ranks and Standard Deviations (in parentheses) across Articulation Subject Subgroups for Nine Motive Areas.

		Motive Areas								
Group	N	Speech	Hearing	Group Af-filiation	Inde-pendence	Security	Achieve-ment	Intimate Personal Relation.	Personal Relations	Dominance
All Artic-ulation	230	2.47 (2.18)	4.91 (2.58)	4.07 (2.73)	3.89 (1.49)	5.39 (2.40)	5.72 (2.47)	4.61 (2.22)	5.15 (2.13)	8.17 (1.97)
Male, 10-13	126	2.59 (1.92)	5.08 (2.34)	4.03 (1.22)	3.88 (2.07)	5.43 (2.24)	5.44 (2.12)	4.90 (2.38)	4.99 (2.18)	8.06 (2.00)
Male, 14-18	27	2.07 (2.22)	5.52 (2.32)	4.94 (2.32)	2.74 (1.26)	6.15 (3.00)	5.37 (2.39)	4.06 (1.75)	5.48 (2.10)	7.87 (1.76)
Fem., 10-13	55	2.47 (2.64)	4.60 (2.11)	3.78 (2.45)	4.45 (2.17)	4.61 (2.40)	6.47 (1.65)	4.57 (1.99)	5.16 (2.10)	8.74 (1.01)
Fem., 14-18	22	2.32 (2.14)	3.95 (4.00)	3.91 (1.95)	4.02 (1.77)	6.23 (1.79)	5.89 (2.03)	3.70 (1.94)	5.66 (1.79)	7.75 (1.52)
All Male	153	2.50 (1.99)	5.15 (2.42)	4.19 (2.92)	3.68 (2.04)	5.56 (2.41)	5.43 (2.17)	4.75 (2.17)	5.08 (2.17)	8.02 (1.96)
All Fem.	77	2.43 (2.35)	4.42 (2.97)	3.82 (2.22)	4.45 (1.98)	5.07 (2.36)	6.31 (1.84)	4.32 (1.96)	5.31 (2.10)	8.45 (1.32)
All, 10-13	181	2.55 (2.36)	4.94 (2.27)	3.96 (1.89)	4.10 (2.13)	5.18 (2.31)	5.75 (1.87)	4.80 (2.20)	5.04 (2.17)	8.26 (1.68)
All, 14-18	49	2.18 (2.19)	4.80 (3.10)	4.48 (2.17)	3.32 (1.58)	4.14 (2.25)	5.60 (2.19)	3.90 (1.89)	5.55 (1.99)	7.82 (1.71)

Table 4. Mean Ranks and Standard Deviations (in parentheses) across Cleft Palate Subject Subgroups for Nine Motive Areas.

		Motive Areas								
Group	N	Speech	Hearing	Group Affiliation	Independence	Security	Achievement	Intimate Personal Relation.	Personal Recognition	Dominance
All Cleft Palate	27	2.37 (1.45)	5.80 (2.29)	4.87 (1.87)	3.63 (2.28)	5.00 (2.16)	5.33 (1.89)	4.76 (2.22)	4.96 (1.93)	8.26 (1.75)
Male, 10-13	12	2.42 (1.59)	6.04 (2.30)	4.25 (1.61)	4.04 (2.28)	4.13 (2.22)	5.71 (2.07)	5.20 (2.09)	4.75 (1.70)	8.25 (2.08)
Male, 14-18	8	2.06 (1.91)	4.63 (1.45)	5.69 (2.09)	2.50 (1.25)	6.38 (1.78)	4.88 (2.34)	5.13 (2.18)	5.38 (2.43)	3.38 (1.11)
Fem., 10-13	5	2.20 (1.71)	5.80 (3.38)	4.80 (2.66)	5.10 (2.76)	4.90 (2.06)	5.30 (1.33)	3.00 (2.45)	5.00 (1.24)	9.00 (0.00)
Fem., 14-18	2	3.75 (2.75)	9.00 (0.00)	5.50 (1.50)	2.00 (0.00)	4.50 (1.50)	5.00 (0.00)	4.50 (3.50)	4.75 (1.75)	6.00 (2.00)
All Male	20	2.28 (1.74)	5.48 (2.12)	4.83 (1.95)	3.43 (2.08)	5.03 (2.34)	5.38 (2.36)	5.23 (2.08)	5.00 (2.09)	8.30 (1.76)
All Fem.	7	2.64 (2.13)	6.71 (2.47)	5.00 (1.63)	4.21 (1.83)	4.79 (1.96)	5.21 (0.74)	3.43 (2.67)	4.86 (1.28)	8.14 (1.91)
All, 10-13	17	2.35 (1.64)	5.97 (2.62)	4.41 (2.23)	4.35 (2.41)	4.35 (2.15)	5.59 (1.76)	4.62 (2.10)	4.79 (1.41)	8.47 (1.78)
All, 14-18	10	2.40 (2.22)	5.60 (1.91)	5.65 (1.99)	2.40 (1.14)	6.00 (1.89)	4.90 (1.77)	5.00 (2.43)	5.25 (2.32)	7.90 (1.64)

Table 5. Mean Ranks and Standard Deviations (in parentheses) across Hard-of-Hearing Subject Subgroups for Nine Motive Areas.

		Motive Areas								
Group	N	Speech	Hearing	Group Affiliation	Independence	Security	Achievement	Intimate Personal Relation.	Personal Recognition	Dominance
All Hard-of-Hearing	47	4.14 (2.57)	3.20 (3.88)	4.44 (2.16)	4.05 (2.04)	5.89 (2.14)	5.30 (2.21)	5.17 (2.08)	4.96 (2.11)	7.98 (1.31)
Male, 10-13	10	5.70 (2.10)	3.80 (3.03)	4.10 (2.69)	4.85 (2.14)	5.85 (2.03)	4.35 (2.43)	5.45 (1.80)	4.45 (2.59)	6.15 (2.43)
Male, 14-18	10	4.30 (2.14)	2.45 (1.17)	5.35 (2.25)	3.55 (2.22)	5.80 (1.93)	5.35 (2.28)	4.60 (2.47)	4.65 (1.61)	9.85 (0.015)
Fem., 10-13	10	3.25 (2.29)	3.10 (2.65)	3.80 (1.60)	4.20 (2.38)	5.55 (2.37)	5.45 (1.60)	5.95 (1.59)	5.25 (1.98)	8.45 (1.15)
Fem., 14-18	17	3.65 (2.81)	3.35 (2.39)	4.47 (1.86)	3.79 (1.61)	6.18 (2.15)	5.74 (2.19)	4.88 (2.05)	5.26 (2.04)	7.68 (2.50)
All Male	20	5.00 (2.23)	3.13 (2.40)	4.73 (2.43)	4.20 (2.17)	5.83 (1.96)	4.85 (2.32)	5.03 (2.26)	4.55 (2.11)	8.00 (2.22)
All Fem.	27	3.50 (2.56)	3.26 (2.43)	4.22 (1.80)	3.94 (1.96)	5.94 (2.21)	5.63 (2.01)	5.28 (1.86)	5.26 (2.01)	7.96 (2.14)
All, 10-13	20	4.48 (2.22)	3.45 (2.87)	3.95 (2.31)	4.53 (2.28)	5.70 (2.14)	4.90 (2.03)	5.70 (1.66)	4.85 (2.32)	7.30 (1.87)
All, 14-18	27	3.89 (2.60)	3.02 (1.83)	4.80 (2.04)	3.70 (1.95)	6.04 (2.08)	5.59 (2.29)	4.77 (2.36)	5.04 (1.82)	8.48 (2.08)

Concordance (47) were computed for each subject group and subgroup. Table 6 shows the resulting W and probability values. Inspection of the table indicates that for all but two of the subject groups or subgroups the W values reached the .05 level. (It should be remembered that W is highly dependent upon N; the N's for the various subject groups are indicated in Tables 1-5.) Only the 10 to 13 year old hard-of-hearing males and the 14 to 18 year old cleft palate females did not demonstrate significant W values. These groups were composed of only ten and two subjects respectively. In view of these results, the first hypothesis regarding agreement within groups is supported.

Further consideration of Table 6 indicates agreement within larger categories of subjects. For example, among the normal subjects significant agreement is demonstrated for 10 to 13 year males, and for 14 to 18 year males; this does not indicate whether there is agreement among the younger and the older males taken together. However, the W value for the subgroup of all normal males also is significant. Therefore, there is general agreement in motive ranking between the younger and the older normal males. Similar inspections can be made for the younger and the older normal females, as well as for all younger and for all older normal

Table 6. Kendall Coefficients of Concordance and Probability Values for Subject Groups.

Group	Normals		Stutterers		Articulation		Cleft Palate		Hard-of-Hearing	
	W	P	W	P	W	P	W	P	W	P
All	.32	.001	.32	.001	.32	.001	.34	.001	.25	.001
Male 10-13	.23	.001	.28	.001	.30	.001	.35	.001	.10	.50
Male 14-18	.34	.001	.45	.001	.42	.001	.49	.001	.57	.001
Female 10-13	.40	.001	.26	.001	.42	.001	.50	.02	.38	.001
Female 14-18	.44	.001	.47	.001	.37	.001	.47	.50	.26	.001
All Males	.26	.001	.33	.001	.31	.001	.36	.001	.24	.001
All Females	.39	.001	.31	.001	.33	.001	.36	.01	.29	.001
All, 10-13	.29	.001	.27	.001	.32	.001	.37	.001	.18	.001
All, 14-18	.39	.001	.44	.001	.34	.001	.39	.001	.35	.001

subjects when the sexes are combined. Thus, within the normal subject group there appears to be general agreement as to the ranking of the nine motives considered.

Likewise, an inspectional analysis leading to the same conclusion can be made of the stuttering and of the articulation defective groups. In the cleft palate group, where the 14 to 18 year old female subgroup did not show significant agreement, the same general conclusion may be reached. That is, the all female cleft palate group demonstrated significant agreement. Apparently the 14 to 18 year old female group, being very small in number, did not exert a significant effect on the over-all agreement within the total female cleft palate group. Among the hard-of-hearing subjects the 10 to 13 year males did not demonstrate significant agreement, but when these were combined with the older hard-of-hearing males, significant agreement among all hard-of-hearing male groups was found. Thus, the finding of two subject subgroups who did not show significant agreement among themselves does not negate the general conclusion of over-all significant agreement among subjects within each subject major category.

On the other hand, the above finding does not mean that all subjects within a speech or hearing category, nor within a given subgroup, were in complete agreement in their ranking of the nine motivational areas. Variation from subject to subject is to be expected. Tables 1-5 indicate the standard deviations of rankings of each motive by subject groups and subgroups. (Inspection of these tables indicates that although several standard deviations were zero or of very small value, these were associated with very small samples.) The standard deviation data in Tables 1-5 should be taken to be indicative of the presence of variability of the order indicated among subjects within the various subject groups and subgroups.

Another demonstration of differences from subject to subject within a given group (even though general agreement in a given group has been shown previously) can be seen in Table 7. In Table 7 the ranks assigned to each motive area by several subjects chosen at random from selected subgroups are shown. The differences seen in Table 7 demonstrate the kind of variability found in rankings from subject to subject, but such differences apparently were not great enough to produce non-significant coefficients of concordance. (The matter of variation from subject to subject will be considered again later in this chapter.)

Analysis related to hypothesis two

The second hypothesis under test stated: There are significant correlations (.05 level) between the ranking of

Table 7. Ranks Assigned to Motive Areas by Subjects Chosen at Random from Selected Subgroups.

Motive	Normal Male 11 yrs.	Normal Male 13 yrs.	Stuttering Female 13 yrs.	Stuttering Female 12 yrs.	Articulation Male 16 yrs.	Articulation Male 16 yrs.
Speech	4	8	2	1	1	1
Hearing	6	6	4	2	33	8
Group Affiliation	1	2	8.5	3	4	5
Independence	8	4	3	6	2	2
Security	3	7	6.5	4	5.5	6
Achievement	5	1	8.5	7	7	4
Intimate Personal Relation.	2	5	1	5	5.5	7
Personal Recognition	7	3	6.5	8	9	3
Dominance	9	9	5	9	8	9

motivation areas by pairs of subject groups and subgroups. To test this hypothesis Spearman rank correlations (47) were computed between the rankings of the nine motivation areas assigned by pairs of subject groups and subgroups. That is, the mean ranks given the nine motives across the subjects of a given category were computed (these are shown in Tables 1-5); these mean ranks were then reranked one through nine, and the rerankings were used for purposes of computing the Spearman rank correlations. Table 8 shows the correlations obtained when all subjects within a given speech or hearing category of subject were considered. Inspection of Table 8 indicates that the Normal subjects (taken as a total group) did not show significant correlations with any of the speech or hearing defective groups.

Table 8. Correlations between Mean Rankings of Nine Motivation Areas by All Subjects in Speech and Hearing Groups.

Group	Normal (N 235)	Stuttering (N 121)	Articulation (N 230)	Hard-of-Hearing (N 47)
Cleft Palate (N 27)	.52	.75**	.88**	.46
Hard-of-Hearing (N 47)	.27	.58	.74*	
Articulation (N 230)	.40	.90**		
Stuttering (N 121)	.52			

Note: *Significant at .05.
**Significant at .01.

In addition, the subjects were divided into age and sex subgroups, and the respective subgroups were compared for ranking the nine motivation areas, using rho. Tables 9, 10, 11 and 12 show the correlations obtained when subjects were subdivided according to sex and age. In these tables significant correlations are seen between normals and stutterers, except in Table 10. However, even in Table 10 the correlation approaches a value of .60 (necessary for significance at the .05 level). In Tables 9-12 none of the correlations between normals and other types of speech or hearing defective subjects was significant. This leads to the conclusion that although Table 8 did not show significance between normals and stutterers when the groups were taken as a whole, stutterers and normals do tend to give similar rankings to the motives investigated, while other types of speech and hearing defective subjects do not rank the motives in a manner similar to normals. (The discrepancy between Table 8 and Tables 9-12 with respect to normals and stutterers appears to lie in the different order in which younger and older subgroups of different types of subjects ranked the motives. That is, young normals and older normals had a rank correlation of .93, significant at .01, and young stutterers and older stutterers had a rank correlation of .92, significant at .01. However,

Table 9. Correlations between Mean Rankings of Nine Motivation Areas by 10-13 Year Old Males in Speech and Hearing Groups.

	Normal (N 85)	Stuttering (N 53)	Articulation (N 126)	Hard-of-Hearing (N 10)
Cleft Palate (N 12)	.50	.73*	.78*	-.17
Hard-of-Hearing (N 10)	.42	.20	.15	
Articulation (N 126)	.47	.95**		
Stuttering (N 53)	.68*			

Table 10. Correlations between Mean Rankings of Nine Motivation Areas by 14-18 Year Old Males in Speech and Hearing Groups.

	Normal (N 46)	Stuttering (N 41)	Articulation (N 27)	Hard-of-Hearing (N 10)
Cleft Palate (N 8)	.47	.67*	.80**	.89**
Hard-of-Hearing (N 10)	.42	.48	.63**	
Articulation (N 27)	.57	.95**		
Stuttering (N 4)	.57			

Note: *Significant at .05.
**Significant at .01.

Table 11. Correlations between Mean Rankings of Nine Motivation Areas by 10-13 Year Old Females in Speech and Hearing Groups.

	Normals (N 96)	Stuttering (N 16)	Articulation (N 55)	Hard of Hearing (N 10)
Cleft Palate (N 5)	.46	.63*	.77*	.12
Hard of Hearing (N 10)	.02	.47	.63*	
Articulation (N 55)	.40	.82**		
Stuttering (N 16)	.63*			

Table 12. Correlations between Mean Rankings of Nine Motivation Areas by 14-18 Year Old Females in Speech and Hearing Groups.

	Normals (N 58)	Stuttering (N 11)	Articulation (N 22)	Hard of Hearing (N 17)
Cleft Palate (N 2)	.52	.65*	.32	-.03
Hard of Hearing (N 17)	.43	.53	.80**	
Articulation (N 22)	.58	.78**		
Stuttering (N 11)	.90**			

Note: *Significant at .05.
**Significant at .01.

combining the age groups for each type of subject, as in Table 8, led to a less than significant correlation between the total groups of subjects.) Support for the conclusion that normals and stutterers rank motives in about the same order is seen in Tables 13 and 14. In these tables significant agreement also is seen between normals and stutterers.

With respect to the rankings of motives by the various speech and hearing defective groups, inspection of Tables 8-14 indicates significant correlations between stutterers, cleft palate and articulation defective subjects in nearly all instances. That is, these speech defective groups tended to rank the motives studied in the same general order. (Although normals and stutterers tended to be similar in motive rankings, and although stutterers, cleft palate and articulation defective subjects tended to be similar in motive ranking, the similarities between cleft palate subjects and normals and between articulation defective subjects and normals were not enough alike to yield significant correlations.)

When comparing hard-of-hearing subjects with speech defectives, similarity in ranking of motives is seen with the articulation defective subjects throughout Tables 8-14, except in Table 9 which has to do with the 10-13 year old males. It will be recalled that earlier (Table 6) it was shown that the

Table 13. Correlations between Mean Rankings of Nine Motivation Areas by All Subjects (Male and Female) 10-13 Years Old in Speech and Hearing Groups.

Group	Normal (N 18)	Stuttering (N 69)	Articulation (N 181)	Hard-of-Hearing (N 20)
Cleft Palate (N 17)	.34	.[illegible]7*	.70*	.54
Hard-of-Hearing (N 20)	.22	.43	.68*	
Articulation (N 181)	.42	.87**		
Stuttering (N 69)	.93**			

Table 14. Correlations between Mean Rankings of Nine Motivation Areas by All Subjects (Male and Female) 14-18 Years Old in Speech and Hearing Groups.

Group	Normal (N 104)	Stuttering (N 52)	Articulation (N 49)	Hard-of-Hearing (N 27)
Cleft Palate (N 20)	.56	.83**	.58	.61*
Hard-of-Hearing (N 27)	.47	.50	.75*	
Articulation (N 49)	.58	.80**		
Stuttering (N 52)	.70*			

Note: *Significant at .05.
**Significant at .01.

10-13 year old hard of hearing males did not demonstrate a significant coefficient of concordance; the explanation for the lack of significant correlation in rankings between the younger hard of hearing males and normals therefore probably lies in the lack of agreement within the younger hard of hearing males as to ranking of motives. It may be concluded that with the exception of the younger males there was general agreement in ranking of motives between hard of hearing and articulation defective subjects. Furthermore, the hard of hearing subjects (all age and sex groups) did not agree with normals or with stutterers with respect to ranking of motives. Younger hard of hearing subjects appeared, according to Tables 8-14, not to agree with any other subgroup of younger subjects with respect to ranking of motives. However, among the older categories of subjects male hard of hearing subjects and cleft palate subjects appeared to show agreement in ranking of motives (but females did not).

In summary, the analysis related to hypothesis two makes it possible neither to accept or reject the hypothesis in toto. The hypothesis is supported with respect to rankings of motive areas by all normal and all stuttering categories of subjects. It also is supported for rankings among all cleft palate, articulation defective and stuttering subjects. Among specific subgroups of subjects the hypothesis is supported by rankings of motives by the following pairs of subject subgroups:

Older male and female hard-of-hearing
  and articulation defective subjects.
Younger female hard-of-hearing and
  articulation defective subjects.
Older male hard-of-hearing and cleft
  palate subjects.

All other comparisons of rankings of motives by other subject groups and subgroups failed to support the hypothesis.

Analysis related to hypothesis three

The third hypothesis stated: The need for good speech and/or hearing is ranked no higher than fourth among the nine motivation areas considered by the various subject groups and subgroups.* To test this hypothesis the mean ranks of motivation areas across all subjects of a given group or subgroup were computed, and these mean ranks were reranked one to nine for the given category of subject. Table 15 shows the ranks of the speech and of the hearing motivation area for the various subject categories. According to Table 15 the speech area was ranked five or lower by all of the normal subject categories. Therefore, hypothesis three is accepted for normal subjects. According to Table 15 hypothesis three is rejected for stuttering subjects, for articulation defective subjects

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*In the present context "high" means ranks of small number such as 1, 2 or 3; "low" means ranks of large number such as 7, 8 or 9.

Table 15. Ranks of the Speech and of the Hearing Area among Nine Motivation Areas by Subject Groups and Subgroups.

Group	Normals		Stuttering		Articulation		Cleft Palate		Hard-of-Hearing	
	Sph.	Hrg.	Sph.	Hrg.	Sph.	Hrg.	Sph.	Hrg.	Sph.	Hrg.
All Subjects of Given Type	8	7	1	7	1	5	1	8	3	1
Male 10-13 yrs.	6	8	1	7	1	6	1	8	7	1
Male 14-18 yrs.	7	6	1	8	1	6	1	3	3	1
Fem. 10-13 yrs.	8	7	1	6	1	5	1	8	2	1
Fem. 14-18 yrs.	5	7	3	7	1	4	2	9	2	1
All Males	6.5	6.5	1	8	1	5	1	8	6	1
All Fem.	8	7	1	6	1	5	1	8	2	1
All 10-13 yrs.	8	7	1	7	1	5	1	8	3	1
All 14-18 yrs.	6	7	1	8	1	6	1.5	6	3	1

and for cleft palate subjects. For hard-of-hearing subjects hypothesis three can be rejected for older females, younger females and for older males. However, the hypothesis cannot be rejected for younger males. The all male hard-of-hearing subgroup in Table 15 shows a rank of six for the speech area, but it is believed that the lower rank for this group is a function specifically of the younger males.

Inspection of Table 15 indicates that the speech area for the various hard-of-hearing groups for which the hypothesis was rejected tended to be ranked two or three in contrast to the nearly unanimous ranking of the speech area as first by the speech defective groups.

With respect to the hearing motivation area, the hypothesis can be accepted for the normal subjects as a group. It also can be accepted for the stutterers and articulation defective subjects. For cleft palate subjects the hypothesis also can be accepted, except for the older males. For hard-of-hearing subjects the hearing motive area was ranked first by all subject categories, and therefore the hypothesis can be rejected for this type of subject as a group.

Table 15 indicates that for the hard-of-hearing subjects both speech and hearing tended to be ranked high, in contrast to the high ranking of speech but the low ranking of hearing by the various speech defective subject groups. An explanation for this may lie in the common occurrence that speech defective children are not characterized by severely defective hearing, but hard-of-hearing children typically have both speech and hearing defects which are treated concurrently in therapy programs.

A further analysis related to hypothesis three was done by tabulating the per cent of individual subjects of each speech or hearing type who assigned each rank to the speech motive area and to the hearing motive area. Table 16 shows these data. Table 16 demonstrates that among the normal subjects 18.9 per cent ranked the speech motive area higher than fourth. That is, hypothesis three would be rejected for 18.9 per cent of the normal subjects, if each normal subject were to be considered individually.

Further inspection of Table 16 shows that among the stuttering subjects 19.3 per cent ranked speech fourth or lower, 22.1 per cent of the articulation defective subjects ranked speech fourth or lower, 18.5 per cent of the cleft palate subjects ranked speech fourth or lower and 55.4 per cent of the hard-of-hearing subjects ranked speech fourth or lower.

With respect to the hearing motive area 18.9 per cent of the normals ranked it above fourth. Among the stutterers 21.7 per cent ranked hearing above fourth, 29.6 per cent of the

Table 16. Per cent of Subjects of Each Speech and Hearing Type Assigning Each Rank to the Speech Motivation Area and to the Hearing Motivation Area.

Ranks	Normals		Stuttering		Articulation		Cleft Palate		Hard-of-Hearing	
	Sph.	Hrg.	Sph.	Hrg.	Sph.	Hrg.	Sph.	Hrg.	Sph.	Hrg.
1	4.2	3.2	45.4	.8	48.4	3.9	43.2	0.0	21.2	29.8
1.5	0.4	1.4	3.3	.8	4.3	1.7	7.4	3.7	2.1	8.4
2	4.2	5.9	16.0	7.5	12.4	7.4	11.1	3.7	17.0	15.0
2.5	1.2	1.1	4.2	1.7	4.3	3.1	0.0	0.0	0.0	6.4
3	5.6	5.9	9.3	6.7	6.4	10.0	11.1	7.4	4.3	4.3
3.5	3.3	1.4	2.5	4.2	2.1	3.5	3.7	11.1	0.0	2.1
4	8.1	5.2	1.7	3.3	5.1	10.5	0.0	7.4	4.3	6.4
4.5	3.5	3.2	1.7	4.2	2.1	4.8	0.0	3.7	6.4	4.3
5	6.0	5.9	4.2	7.5	2.6	7.0	3.7	3.7	6.4	0.0
5.5	5.6	4.6	0.0	2.5	3.4	8.3	7.4	7.4	8.4	0.0
6	9.6	11.2	2.5	8.3	3.4	9.2	0.0	11.1	4.3	8.4
6.6	3.9	5.6	1.7	7.5	0.0	3.1	3.7	0.0	4.3	2.1
7	11.7	14.0	1.7	9.2	1.7	8.7	3.7	3.7	10.6	6.4
7.5	2.2	6.6	3.3	6.7	0.4	3.5	0.0	7.4	0.0	0.0
8	14.8	14.3	2.5	10.8	1.7	9.2	0.0	14.8	4.3	0.0
8.8	3.5	2.8	0.0	2.5	0.4	0.9	0.0	0.0	0.0	0.0
9	12.2	7.7	0.0	15.8	1.3	5.2	0.0	14.8	6.4	6.4

articulation defective subjects ranked hearing above fourth, and 25.9 per cent of the cleft palate subjects ranked hearing above fourth. Among the hard-of-hearing subjects who might be expected to rank hearing high because of their handicap, 34.0 per cent ranked the hearing motive area fourth or below.

In view of these findings (although it may be concluded that hypothesis three may be accepted so far as speech is concerned for normal subjects), for an important segment of the normals taken as individuals the hypothesis should be rejected so far as speech is concerned. Furthermore, although hypothesis three may not be accepted so far as speech is concerned for the speech defective subjects, important proportions of such subjects placed the speech motive area in the lower two-thirds of the ranking order. With respect to hearing, a similar observation may be made regarding the normal and the speech or hearing defective subjects. That is, on the order of 20 per cent or more of the normals ranked the hearing motive area high, and on the order of 20 per cent or more of the speech and/or hearing defective subjects ranked the hearing motive area in the lower two-thirds of the ranking order. These data are an expression of individual subject variability with respect to the ranking of speech and hearing.

Analysis related to predominant expressed motivation areas

It will be recalled that Tables 1-5 presented the mean ranking of each motivation area for the various speech and/or hearing types of subjects and for age and sex subgroups. The mean ranks in the body of those tables were converted to rankings one through nine, and the first three ranked motive areas noted. The following listing shows the predominant or preferred motivation areas for all subjects in the various subjects groups and subgroups (motivation areas ranked one, two and three respectively).

All Normals: Independence, Intimate Personal Relation., Group Affiliation.

- Normal Males, 10-13 yrs.: Independence, Group Affiliation, Personal Recognition.
- Normal Males, 14-18 yrs.: Independence, Achievement, Intimate Personal Relation.
- Normal Females, 10-13 yrs.: Group Affiliation, Intimate Personal Relation., Independence.
- Normal Females, 14-18 yrs.: Independence, Intimate Personal Relation., Group Affiliation.

All Stutterers: Speech, Independence, Intimate Personal Relations.

- Stutterer Males, 10-13 yrs.: Speech, Independence, Group Affiliation.
- Stutterer Males, 14-18 yrs.: Speech, Independence, Intimate Personal Relation.
- Stutterer Females, 10-13 yrs.: Speech, Independence, Intimate Personal Relation.

Stutterer Females, 14-18 yrs.: Intimate Personal Relations, Independence, Speech.

All Articulation: Speech, Independence, Group Affiliation.

Artic. Males, 10-14 yrs.: Speech, Independence, Group Affiliation.

Artic. Males, 14-18 yrs.: Speech, Independence, Intimate Personal Relation.

Artic. Females, 10-13 yrs.: Speech, Group Affiliation, Independence.

Artic. Females, 14-18 yrs.: Speech Intimate Personal Relations, Group Affiliation.

All Cleft Palate: Speech, Independence, Intimate Personal Relations.

Cleft Palate Males, 10-13 yrs.: Speech, Independence, Security.

Cleft Palate Males, 14-18 yrs.: Speech, Independence, Hearing.

Cleft Palate Females, 10-14 yrs.: Speech, Intimate Personal Relations, Group Affiliation.

Cleft Palate Females, 14-18 yrs.: Independence, Speech, tied ranking for Security and Intimate Personal Relations.

All Hard-of-Hearing: Hearing, Independence, Speech.

Hard-of-Hrg. Males, 10-14 yrs.: Hearing, Group Affiliation, Achievement.

Hard-of-Hrg. Males, 14-18 yrs.: Hearing, Independence, Speech.

Hard-of-Hrg. Females, 10-14 yrs.: Hearing, Speech, Group Affiliation.

Hard-of-Hrg. Females, 14-18 yrs.: Hearing, Speech, Independence.

The above listing of predominant motives demonstrates a frequent occurrence of Independence, Intimate Personal Relationships and Group Affiliation among the various subject categories (other than speech among the speech and hearing defective subjects and hearing among the hard-of-hearing subjects).

(An interesting sidelight of the data regarding preferred motivation areas is the position of dominance. With the exception of the subgroup cleft palate females 14-18 years who ranked the dominance motive eighth, all other subject groups and subgroups ranked the dominance motive area ninth. In addition, the standard deviation for ranking of dominance was generally small in comparison to the standard deviations for the other motive areas.)

CHAPTER V

CONCLUSIONS AND DISCUSSION

Conclusions

The preceding analysis of the data obtained on the normal and speech and/or hearing defective subjects used in this study lead to the following conclusions:

1. Normal children and children with speech and/or hearing defects (stutterers, articulation defects, cleft palate, and hard-of-hearing) show general agreement within their group as to the ranking of the motivation areas considered in this study.

2. Within each category of subject considered, individual subjects showed variability as to ranking order of the nine motive areas considered. That is, not all subjects give the same rank order to the motives of interest to this study.

3. With the exception of stutterers, categories of speech and hearing defective children (articulation defective, cleft palate and hard-of-hearing) give different rank orders to the motive areas considered than do normal children.

4. Normal children and stutterers give essentially similar rank orders to the nine motive areas considered in this study. The major motive area of difference between these two groups is with respect to the Speech motive.

5. Categories of speech defective children (stutterers, cleft palate, and articulation defective) are in essential agreement as to ranking of the nine motive areas considered. They are especially alike in ranking of the speech motive.

6. With the exception of younger males (10-13 years old) articulation defective and hard-of-hearing children are similar in ranking of the motives considered.

7. Hard-of-hearing children and stutterers give different rank orders to the nine motive areas considered in this study.

8. Male hard-of-hearing subjects 14-18 years of age and male cleft palate children 14-18 years of age agree as to ranking of motives.

9. Normal subjects rank the need for speech and hearing in the lower two-thirds of the rank order of the nine motive areas considered for this study.

10. Stuttering, articulation defective and cleft palate subjects rank the speech motive in the upper one-third of the rank order of the nine motive areas considered for this study.

11. Except for 10 to 13 year old males, hard-of-hearing subjects place the speech motive in the upper one-third of the rank order of the nine motive areas considered for this study.

12. For hard-of-hearing subjects, the speech motive area tends to be ranked higher than speech is ranked by normals, but lower than the speech motive is ranked by other speech defective children (stutterers, articulation defective and cleft palate).

13. The hearing motive generally is ranked in the lower two-thirds of the rank order of the nine motive areas considered for this study by stuttering, articulation defective and cleft palate children.

14. Hard-of-hearing children rank the hearing motive above all of the other motive areas considered in this study.

15. Although as groups the various categories of children utilized in this study show general agreements as to ranking of the motive areas, on the order of 20 to 30 per cent of the children in groups place the speech and the hearing motives in a different third of the ranking order of motives than do the other children in the same speech or hearing category.

16. Among speech and hearing defective children (stuttering, articulation defective, cleft palate and hard-of-hearing children) the speech motive is predominant among the motive areas.

17. Among the hard-of-hearing children the hearing motive is among the predominant motive areas.

18. Among speech and hearing defective children the motive areas of Independence, Intimate Personal Relation. and Group Affiliation also are among the predominant motive areas (or nine motive areas considered).

19. Among normal children the motive areas of Independence, Group Affiliation and Personal Recognition are the top three among the nine motive areas considered for this study.

Discussion

In the present research the preceding conclusions must be considered to apply to the types of children used for subjects, namely, speech and/or hearing defective children who are able to make adjustments to the regular school program and who, in the main, were being treated by speech therapists in the public school context. It should be assumed that the sample did not include mentally retarded children (the requirement that the child be able to read and understand the Motivation Preference Test form in effect provided an automatic screening out of retarded children). The normal group of subjects met the same type of screening, but otherwise were not selected for special qualities. An assumption of the study is that both the normal children and the speech and/or hearing handicapped children used in the research presented an unbiased and representative sample of the public school population of normal and of speech or hearing defective children who are not mentally retarded. Thus the conclusions of the study have relevance to public school children, but should not be assumed to have relevance to children who are not able to adjust to the regular school situation.

In this research the emphasis was intended to be upon the speech and hearing motives rather than upon personality variables as often discussed in the psychological literature. The intent was not to investigate personality structures of normal and speech and hearing handicapped children in the sense of attempting to describe their personality structures. Rather, the intent was to make, within a circumscribed number of personality aspects (motivation areas), comparisons among children with various speech and hearing conditions. It is intended that the interpretation of this study will be directed toward its therapeutic applications, especially as its applications affect speech and hearing therapy with children from the public schools.

The study demonstrated that within major categories of children (normal, stuttering, articulation defective, cleft palate and hard of hearing) there is general agreement as to the ranking of the nine motive areas considered. However, it may be that the statistic used for this analysis (Kendall Coefficient of Concordance) was not as sensitive to individual differences in motivation preference pattern as other anaylses. For example, it was demonstrated that on the order of 20 to 30 per cent of the subjects of a given group ranked the speech motive in a different third of the ranking order than did their fellows. Therefore, the study has demonstrated variation from subject to subject with respect to motivation preference, especially with respect to the speech and hearing areas. The observed standard deviations of ranks for given motive areas, being on the order of two ranks, also demonstrated subject variation. These considerations suggest that the Motivation Preference Test developed for this research is potentially useful for discovering differences in motivational patterns among children, both with respect to children having similar speech and/or hearing conditions and with respect to children having different speech and/or hearing conditions.

A qualification of the present study needs to be realized in that the presence of a child in a speech or hearing therapy program may lead him to given responses indicating his strong need for better speech or hearing. (In the present study the defective subjects were drawn largely from children already enrolled in such therapy programs.) This may lead to a distorted placement of the speech or hearing motive in the child's ranking of motive areas. On the other hand, only children in therapy programs receive therapy, and therefore if a strong motivation for therapy is the result of therapeutic suggestion, the desired result, namely, a motivation to improve speech or hearing, is obtained.

It should be realized that in this research the speech and/or hearing groups as well as the two age groups considered (10 to 13 years, and 14 to 18 years) are relatively gross classifications of children. Further subclassifications of children, perhaps to the extent of considering each child individually, might be expected to reveal further motivation pattern variations which are of consequence.

The Motivation Preference Test developed for this study has, at this time, only face validity. The procedures by which the test was developed were largely directed toward this type of validation. It was not within the scope of this study to investigate further either validity or reliability of the test, and for the present the test needs to be accepted on the basis of face validity.*

Also, a further step in the refinement of the test should be the attempt to increase the sensitivity of the test and probably to make it shorter. The pattern for this effort would be on the basis of item analysis. (Although the present form of the test is long, as the test was being administered the impression was gained that the subjects were not appreciably affected by a fatigue factor.) If a shorter and more sensitive form of the test were developed a more definitive description of the motivational preferences of normal and speech and hearing defective children would be possible.

The present experimental results suggest that not all children having speech and hearing problems have the desire for better speech and/or hearing high in their hierachy of motives. This observation is of consequence to speech and/or hearing therapy in that therapists should be aware of the problem it presents when giving therapy to speech and hearing defective children. Further description of the motive pattern specific to a given child in therapy very possibly has importance to the form of speech or hearing therapy to be given to that child. There is a need to study experimentally the effects specific motivation preference patterns have on the orientation of therapy for the child being treated. If relationships are demonstrated between a child's motivational pattern and effectiveness of therapy given to him, the therapist can be provided with a powerful diagnostic and therapeutic tool in the form of a technique for assessing the child's motivational preferences.

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*As of this writing a project is underway to assess the reliability of the Motive Preference Test with a group of normal ten to eighteen year old males.

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APPENDIX A

LISTING OF MOTIVES, DRIVES, AND NEEDS OBTAINED FROM THE LITERATURE

Primary or Basic Drives (Motives)

Hunger	(12, 16, 45, 46)
Sex	(12, 31, 45, 46, 48)
Thirst	(12, 27)
Sentience	(16, 31)
Excretion	(12, 46)
Rest	(12, 16, 46)
Nausea	(12)
Nursing	(12)
Avoiding Pain	(12)
Air-Hunger	(12)
Fatigue	(12)
Tickle	(12)
Fear and Anger	(12)

Secondary, Derived, Acquired, or Learned Drives (Motives)

*Achievement

Achievement (31, 45, 48, 49, 50, 51), construction (16), self-actualization (27), mastery (28).

*Group Affiliation

Affiliation (12, 28, 31, 45, 46, 48, 50), relatedness (24), gregariousness (16), sharing and participation (51), inclusion (23).

*Dominance
Power (45), dominance (31, 48, 50), control of others (9), control (23).

*Security
Fear (45), harmavoidance (31), security and protection (28), security (8, 38), succorance (31, 48, 50), fright (46), interference avoidance (46), economic security and freedom from fears and aggression (51).

Aggression (31, 45, 46, 48, 50).

*Personal Recognition
Self-esteem (27), attention, be a cause, praise and approval (28), defedence (31), infavoidance (31), transcendence (24), appeal (16), recognition (8), win approval (53), attention (38).

New Experiences (52), curiosity (16, 27, 28, 46), new expression (8), understanding (31), change (48).

Play (31), aesthetic needs (27), sensory motor needs (46), art and art appreciation (49).

*Independence
Autonomy (31, 38, 48, 50), maintain the self (28), self-assertion (16), identity (24), self-respect (52).

Intimate Personal Relationships
Belongingness and love (27), affection and tenderness (28), intimate response (8), rootedness (24) belonging (52), love and affection (52), affection (23, 38).

Miscellaneous
Counteraction (45).

Exhibition (31, 48).

Nurturance (16, 31, 48).

Order (31, 48).

Material possession (49), reward (52)

School (49).

Frame of orientation (24).

Intraception (48).

Endurance (48).

Desire to do right (52).

Need for a world outlook (51).

Self-abasement (31, 46, 48, 50).

Freedom from guilt (51).

Deference (31, 46, 48).

Freedom (38).

Notes:

Numbers in parentheses indicate the source of the listed needs. See LIST OF REFERENCES.

Terms underlined were arbitrarily chosen for categories of needs.

Asterisks indicate need or motive areas chosen for this study.

APPENDIX B

DEFINITION OF MOTIVES UTILIZED

The following motivation areas and terms were selected for use in this study because of their ability to be interpreted broadly and because they encompass the terms and concepts associated with their use as described. That is, each author quoted or each theory proposed has indicated essentially similar ideas, although the exact term used may have been different. Some authors and the terms they have used are mentioned under areas listed.

SPEECH

Selected a priori for purposes of this study. The need for speech, or better speech, is that desire to make one's wants clearly understood and to convey one's more abstract thoughts and ideas precisely in a verbal medium.

HEARING

Selected a priori for purposes of this study. The need for hearing, or better hearing, is the desire to comprehend fully the surrounding environment through its sounds and to appreciate through hearing, the thoughts, ideas and wants of others and to be capable of completing the communication cycle by being an able receiving unit.

SECURITY

Van Shoick (8) listed "security" as one of his four basic needs, and Symonds (28) included "security and protection" in his list of derived drives. Murray (31) calls that need which causes one to avoid pain and take precautions, "harm-avoidance," while the safety needs of Maslow (27) seem to cover the same ground. Murray's "succorance" which is defined as the presence of sympathetic aid when needed, which Edwards has adopted as one of his manifest needs on the Edwards Personal Preference Schedule, and which Brunswick utilized in studying adolescents, seems to represent one area of the security need or drive with which children have a great and immediate concern. Tolman (46) listed "fright" under the major heading of aversions to which he attributed a prime motivating position. Fright would seem to account for the same behavior as harmavoidance and thus has been included under this study's broad need (drive) area of security. For the present purpose security will be taken to mean the need of a child to feel confident that he will be safe from harm, that he need not be overly concerned about not having food and shelter, and that he will have sympathetic support of a parent figure.

PERSONAL RECOGNITION

Van Shoick pointed to the desire for recognition (8) as basic to motivation in rehabilitation therapy. Rivlin (52), when listing the major motives to which the teacher can appeal, called this need the desire to win approval of one's peers and parents. Maslow (27) listed "esteem needs" as fourth in his hierachy of needs, while Symonds (28) in a list of nine derived needs, listed two as the "desire for attention from other people" and the "desire for praise and approval." Murray (31) listed "defedence" (to vindicate the ego) and "infavoidance" (avoiding humiliation); from these a desire for protecting one's achieved and recognized status may be inferred. Cattell, in Hall and Lindzey (16), tentatively suggested "appeal" as a motivating force. Thus personal recognition has achieved a certain theoretical prominence which seems to make this term appropriate in a study of children's needs, desires, or drives. Personal recognition is the desire to be associated with socially approved accomplishments, to which accrue praise and approval, accompanied by the continuing need to be known as a "good" or "approved" person. The use of this term is further interpreted to mean the avoidance of humiliating or status reducing situations so that the individual may retain his personal appeal and thus bring him closer to his image of his "ideal self."

INTIMATE PERSONAL RELATIONSHIPS

Fromm's (24) "rootedness," Van Shoick's (8) "intimate response," Symonds' (28) "affection and tenderness" and Maslow's (27) need for "belongingness and love" are all representative of the general recognition of this major need or drive. It seems particularly pertinent in dealing with children's motives. *Intimate personal relationships* is the need for love and affection or the desire to be needed, wanted and loved. It infers a personal, intimate relationship.

DOMINANCE

In Atkinson's collection of papers (45) one of the major motives studied was that of "power." The power motive is very much like that of the unconscious reason of the handicapped to remain disabled (neurotic tendency to control those caring for him) discussed by Garrett and Myers (9). Murray (31) called the need "dominance" as did Edwards (48) and Frankel-Brunswick (50). Adler (53) suggested that man's prime motive was that of "superiority." *Dominance* means that motive which explains the behavior utilized in exercising control over the environment, be it inanimate, animal or human. The control may be only over those things or people in which one is interested in controlling, and such control may be physical or psychological, overt or covert.

INDEPENDENCE

The desire to "maintain the self" mentioned by Symonds (28) has been labeled by Murray (31) and others (48, 50) as "autonomy." This broader term includes the "resisting of coercion" and the "defiance of convention." Fromm refers to this need as "identity" while Cattell (16) calls it "self-assertation." Goldstein (54) in describing the major drive of the organism as "self-actualization" probably was referring partly to independence. (In utilizing this motive in the present study, it can be considered to be at one end of a continum which has "dependence" at the other end.) Independence is the need to be free from external bonds, and the ability to maintain the self as a separate entity functioning in such a way as to achieve those goals which have been set by the individual. It included asserting one's self as a separate force from the social group.

GROUP AFFILIATION

The group affiliation motive has been differentiated from "intimate personal response" by keeping this motive within the confines of group experience. It has been recognized and discussed in Atkinson (45), Murray (31), Tolman (46), Symonds (28), Edwards (48), Frenkel-Brunswick (50), and in Young (12). Cattell (16) recognized a similar need called "gregariousness" and Fromm (24) spoke of "relatedness" in similar terms. Group affiliation is defined as that need to be part of something larger than one's self or family; to belong and to be with others in a common purpose relationship.

ACHIEVEMENT

The achievement motive has received much attention from McClelland and Atkinson (45) and was recognized by the same name in Murray (31), Jersild and Tasch (49), and Edwards and Frenkel-Brunswick (48, 50). Maslow spoke of the "self-actualization needs" (27) and Goldstein's (54) major emphasis seems to rest on this point. Symonds (28) spoke of the "need for mastery" while Cattell (16) labeled it "construction." The concept of achievement is broad and is here in the sense of doing and mastering. In that testing is frequent and traditional in schools, the achievement motive is assumed to play an active part in the lives of the subjects of this study. Achievement is that desire which prompts one to build or to accomplish in as complete and excellent a manner as he is capable; the desire to do something as well as or better than another or any other person.

Note: Numbers in these definitions are reference numbers used in the LIST OF REFERENCES.

APPENDIX C

PILOT STUDY REGARDING TEST TECHNIQUE

A study was done in the Spring of 1959 to determine a desirable technique for obtaining a rank order of ten motivation areas. Fourteen young adults in The Pennsylvania State University intensive speech program ranked ten statements representative of the following needs in order of personal preference:

> personal recognition, independence, speech and hearing, self-enchancement, security, superior feelings, personal appearance, intimate personal relationships, material good, self-gratification.

In addition, these same people were given a test instrument in which each statement was paired with each other statement: they chose the preferred statement in each pair. By this forced choice technique ranking was determined by counting the number of times a given statement was preferred over each other of the nine statements.

The accompanying table shows the rho values which were computed between the rankings obtained in the two test conditions, both for the individuals and for the group as a whole. (For the whole group the mean rank for each area across all subjects was computed under the two test conditions.) All rho's were significant at the 5 per cent level.

On the basis of these data, and considering the comments of subjects relating to the comparative ease of the force choice technique, this technique was chosen for further use. It was felt that the comparative ease of the forced choice method would be particularly important for younger children.

Table 17. Correlations (Rho) between Two Methods of Ranking Ten Statements Regarding Motivational Areas.

Subject	Rho
I	.58
II	.96
III	.96
IV	.61
V	.76
VI	.54
VII	.75
VIII	.68
IX	.72
X	.86
XI	.91
XII	.91
XIII	.73
XIV	.75
Total Group	.94

APPENDIX D

Sources of Potential Statements

Male, M.A., Instructor in Clinical Speech, The Pennsylvania State University.

Male, M.A., Clinical Supervisor, Summer Residential Program for Children, The Pennsylvania State University.

Male, Ph.D., Associate Professor of Psychology, The Pennsylvania State University.

Male, Ph.D., Associate Professor of Clinical Speech, The Pennsylvania State University.

Male, Ph.D., Associate Professor of Clinical Speech, The Pennsylvania State University.

Male, Ph.D., Associate Professor Child Development and Family Relations, The Pennsylvania State University.

Female, M.S., Speech Clinician, The Pennsylvania State University.

Male, M.A., State Audiologist of Pennsylvania.

Male, Ph.D., Associate Professor of Clinical Speech, The Pennsylvania State University.

Female, B.S., former teacher at Warrensville Heights High School.

Male, M.A., Supervisor of Clinical Speech, The Pennsylvania State University.

Male, M.A., Clinical Supervisor, Summer Residential Program for Children, The Pennsylvania State University.

Female, B.A., Nursery School teacher at State College Cooperative School.

Male, B.S., Graduate Research Assistant, The Pennsylvania State University.

APPENDIX E

CRITERIA FOR ELIMINATION OF STATEMENTS AND SOME EXAMPLES

Statements were eliminated if:

1. An interviewee's response to the question on meaning indicated an obvious misunderstanding of the statement. Two or more misunderstandings for a statement among the fifteen children were considered indicative of a poor statement. The statement was eliminated from the list.
2. Two or more responses indicated that a statement did not seem to convey the same thoughts as the rest of the sentences in the group.
3. Three or more responses indicated a distortion of the meaning owing to an emotional reaction that could be obviously traced to the way in which a statement was written.

Examples

An example of elimination on a criteria #1 basis occurred as a response to the following statement: "I like to have people think that I know more than they do." This statement was written for the dominance motive. A twelve year old's response indicated a lack of understanding in so far as the purpose of the statement was concerned when he said, "This means I want to fool people so they don't think I'm dumb."

An example of elimination on a criteria #2 basis occurred on the response to the statement: "I would like to invent something that people need." This statement was submitted for the need for personal recognition. The following fifteen year old's response indicated a difference of meaning from the rest of that motive group: "If you make something that people need, then you can make more money and be successful." (Indirectly this may have indicated a need for personal recognition, but it seemed more apparent that this child interpreted it as a device for a status seeking and financial reward that seems to go beyond the significance of the contextual meaning of personal recognition in this study.)

An example of elimination on a criteria #3 basis occurred on the following statement which was submitted for the achievement motive: "There is too much emphasis on getting good grades." The following sixteen year old's response indicated an emotional reaction that interfered with the concept of achievement as is used in this study: "I think that's true because I would rather play games and have time for other things instead of doing homework all the time."

Some statements were modified as a result of these interviews, as the following statement on intelligence indicates. The original statement was submitted as follows: "I like to decide alone what I want to do." As a result of suggestions from the children the statement was modified to: "I like to decide for myself what I want to do." Another statement modified to convey the idea more effectively was submitted for the personal recognition motive: "I like for people to tell me when I do good work." This was changed to: "I like to have people tell me when I do good work." A typical response that indicated acceptance was the fourteen year old's response to the following statement on security: "When I get into trouble I like to know that someone will help me out." (response) "That means that somebody like your parents will come whenever you need them because they want to help you. That's almost the same as the last one." The "last one" referred to is the statement: "I like to feel that someone older is around a lot so that I won't get hurt or sick."

APPENDIX F

STATEMENTS USED FOR MOTIVATION PREFERENCE TEST

Section I

1. I want to talk very well. (speech)
2. I want to hear the sounds around me and know what people are saying. (hearing)
3. I like to decide for myself what I want to do. (independence)
4. I am happy when people ask me to join them. (group affiliation)
5. I wish people paid more attention to things that I do. (personal relations)
6. It makes me feel good that people confide in me and tell me what they don't tell anyone else. (intimate personal relationships)
7. I want my mother or father, or some big person, to be there when I get home from school. (security)
8. I always enjoy doing things that are going to be good. (achievement)
9. I like my friends to do what I tell them. (dominance)

Section II

1. I want to speak like most other people. (speech)
2. I wish I could hear most things people say when they talk to me. (hearing)
3. I want to be able to do things on my own. (independence)
4. I go with my friends even if I don't like what they are doing. (group affiliation)
5. I like to have people tell me when I do something good. (personal relations)
6. It makes me feel good to know that others trust in me and tell me what they don't tell anyone else. (intimate personal relationships)
7. When I get into trouble I like to know that someone will help me out. (security)
8. I like to be able to do things better than others. (achievement)
9. I want to be first or leader whenever we play games. (dominance)

Section III

1. I want to be able to talk as well as most other people. (speech)
2. Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others. (hearing)
3. I want to be able to do things for myself and not have to have help from other people. (independence)
4. I like to belong to clubs. (group affiliation)
5. I want to do things that will make people know I am doing something important. (personal relations)
6. I have to tell about myself to other people, and I want other people to tell me things about themselves. (intimate personal rolationships)
7. I like to fee that someone older is around a lot so that I won't get hurt or sick. (security)
8. I wish I could always be tops in everything. (achievement)
9. I want people to do what I tell them. (dominance)

Note: After each statement the motive area for which the statement was intended is contained in parentheses.

APPENDIX G

FORM A OF THE MOTIVATION PREFERENCE TEST

(The following pages in Appendix G are copies of the Motivation Preference Test and therefore are not numbered consecutively for this report.)

A

SURVEY NUMBER _____________

NAME _____________________________ AGE _______________ SEX _______________
(years) (months)

SCHOOL _____________________________ EXAMINATION DATE _______________ GRADE _______

SOCIO-ECONOMIC STATUS ("u" = upper; "m" = middle; "l" = lower) — estimate and circle one:
(well-to-do) "uu" "mu" "lu" (comfortable) "um" "mm" "lm" (poor) "ul" "ml" "ll"

SIBLINGS — draw a line under the number of living children; circle one:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

TYPE OF SPEECH DEFECT — check applicable information:

(ORGANIC FACTORS)

_____articulation: _____substitution
_____omission
_____distortion

_____cleft palate _____prosthesis
_____cleft lip
_____hard of hearing
mild__________(15 - 30 db)
moderate_______(30 - 60 db)
severe________(60 - 80 db)
profound _____(80 + db)

_____voice: _____high pitch
_____low pitch
_____aphonia
_____hoarseness

_____rhythm: _____stuttering
secondaries:
_____many
_____few
_______none
_____cluttering

_____cerebral palsy _____athetoid
_____spastic

_____dental _____overbite
_____prosthesis
_____underbite

_______________________other

DEGREE OF INVOLVEMENT — circle:
(NORMAL): excellent good fair poor (DEFECTIVE): borderline mild moderate severe

---

PREGNANCY DATA: _____precipitous delivery _____"difficult birth" _____normal birth
_____birth injuries _____convulsions _____high fevers

EVIDENCE OF BRAIN DAMAGE: _____highly probable _____possible _____no known problems

GENERAL DEVELOPMENT: _____slow _____average _____rapid
PRESENT COORDINATION. _____slow _____average _____excellent

PRESENT PHYSICAL CONDITION: _____poor _____average _____good _____excellent

MENTAL DEVELOPMENT: _____IQ _______________name of test _________when tested
general ranking in class _____first third _____middle third _____lower third

GENERAL HEALTH: _____usually poor _____usually fair _____usually good _____usually excellent
Does the child have any physical deformity? _________yes
_________no SPECIFY:

Has the child ever had: _____tongue clipped _____tonsils removed _____adenoids removed

any impairing diseases or accidents ____________________________
____________________________(specify)

GENERAL EMOTIONAL CONDITION: (circle)
poor fair average good excellent

FATHER: _____________present occupation _____speech defect (if so, specify)________________

education — circle one: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
(if more, specify)____________________________
age _______________

MOTHER: _____________present occupation _____speech defect (if so, specify)________________
education — circle one: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
(if more, specify)____________________________
age _______________

MARITAL CONDITION OF THE HOME: Parents are: _____separated _____divorced _____foster _____stepfather
_____stepmother

NOTE TO EXAMINER: TEAR OFF THIS PAGE AND PRESENT THE EXAMINATION FORM TO THE STUDENT.
ASK HIM TO READ THE DIRECTIONS AND FILL IN THE EXAMPLES.
ANSWER ANY QUESTION HE MAY HAVE IN RELATION TO THE DIRECTIONS.
WHILE THE STUDENT IS ANSWERING THE EXAMINATION, PLEASE FILL IN THE ABOVE CHECK-LIST.
ANSWER THE APPLICABLE INFORMATION TO THE BEST OF YOUR KNOWLEDGE. IT IS NOT NECESSARY
TO SPEND MORE THAN THE TIME REQUIRED FOR THE STUDENT TO COMPLETE HIS EXAMINATION FORM.

1.____a) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.
____b) I want to be able to do things on my own.

2.____a) I like to decide for myself what I want to do.
____b) I want to talk very well.

3.____a) I want to be first or leader whenever we play games.
____b) I like to be able to do things better than others.

4.____a) I want to be able to talk as well as most other people.
____b) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.

5.____a) I want to be able to do things for myself and not have to have help from other people.
____b) I want to be able to talk as well as most other people.

6.____a) I want to hear the sounds around me and know what people are saying.
____b) I like to decide for myself what I want to do.

7.____a) I have to tell about myself to other people, and I want other people to tell me things about themselves.
____b) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.

8.____a) I want to talk very well.
____b) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.

9.____a) I wish people paid more attention to things that I do.
____b) I want to talk very well.

10.____a) I want to be able to do things for myself and not have to have help from other people.
____b) I want people to do what I tell them.

11.____a) I want to be able to do things for myself and not have to have help from other people.
____b) I want to do things that will make people know I am doing something important.

12.____a) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.
____b) I want to do things that will make people know I am doing something important.

13.____a) I want to be able to talk as well as most other people.
____b) I like to belong to clubs.

14.____a) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.
____b) I want to be able to do things for myself and not have to have help from other people.

15.____a) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.
____b) I like my friends to do what I tell them.

16.____a) I always enjoy doing things that are going to be good.
____b) I want my mother or father, or some big person, to be there when I get home from school.

17.____a) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.
____b) I want to be first or leader whenever we play games.

18.____a) I like to belong to clubs.
____b) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.

19.____a) I want to be able to talk as well as most other people.
____b) I wish I could always be tops in everything.

20.____a) I want to do things that will make people know I am doing something important.
____b) I have to tell about myself to other people, and I want other people to tell me things about themselves.

21.____a) I want to be able to do things for myself and not have to have help from other people.
____b) I like to feel that someone older is around a lot so that I won't get hurt or sick.

22.____a) I wish I could hear most things people say when they talk to me.
____b) I want to be able to do things on my own.

23.______a) I go with my friends even if I don't like what they are doing.
______b) I wish I could hear most things people say when they talk to me.

24.______a) I like to belong to clubs.
______b) I wish I could always be tops in everything.

25.______a) I want to be able to talk as well as most other people.
______b) I have to tell about myself to other people, and I want other people to tell me things about themselves.

26.______a) I want to do things that will make people know I am doing something important.
______b) I like to belong to clubs.

27.______a) I like to have people tell me when I do something good.
______b) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.

28.______a) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.
______b) I want people to do what I tell them.

29.______a) I like to be able to do things better than others.
______b) I wish I could hear most things people say when they talk to me.

30.______a) I want to do things that will make people know I am doing something important.
______b) I wish I could always be tops in everything.

31.______a) I want people to do what I tell them.
______b) I want to be able to talk as well as most other people.

32.______a) I wish I could hear most things people say when they talk to me.
______b) When I get into trouble I like to know that someone will help me out.

33.______a) I want to talk very well.
______b) I am happy when people ask me to join them.

34.______a) I have to tell about myself to other people, and I want other people to tell me things about themselves.
______b) I like to feel that someone older is around a lot so that I won't get hurt or sick.

35.______a) I like to be able to do things better than others.
______b) When I get into trouble I like to know that someone will help me out.

36.______a) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.
______b) I want my mother or father, or some big person, to be there when I get home from school.

37.______a) I want my mother or father, or some big person, to be there when I get home from school.
______b) I wish people paid more attention to things that I do.

38.______a) I want my mother or father, or some big person, to be there when I get home from school.
______b) I want to talk very well.

39.______a) I wish people paid more attention to things that I do.
______b) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.

40.______a) I like my friends to do what I tell them.
______b) I always enjoy doing things that are going to be good.

41.______a) I want my mother or father, or some big person, to be there when I get home from school.
______b) I like my friends to do what I tell them.

42.______a) I like to belong to clubs.
______b) I have to tell about myself to other people, and I want other people to tell me things about themselves.

43.______a) I have to tell about myself to other people, and I want other people to tell me things about themselves.
______b) I want to be able to do things for myself and not have to have help from other people.

44.______a) I want to be first or leader whenever we play games.
______b) I like to have people tell me when I do something good.

45._____a) I want to hear the sounds around me and know what people are saying.
_____b) I wish people paid more attention to things that I do.

46._____a) I like to feel that someone older is around a lot so that I won't get hurt or sick.
_____b) I want to be able to talk as well as most other people.

47._____a) I want to speak like most other people.
_____b) I wish I could hear most things people say when they talk to me.

48._____a) I like to feel that someone older is around a lot so that I won't get hurt or sick.
_____b) I want people to do what I tell them.

49._____a) I like to be able to do things better than others.
_____b) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.

50._____a) I like my friends to do what I tell them.
_____b) I am happy when people ask me to join them.

51._____a) I have to tell about myself to other people, and I want other people to tell me things about themselves.
_____b) I want people to do what I tell them.

52._____a) I want my mother or father, or some big person, to be there when I get home from school.
_____b) I am happy when people ask me to join them.

53._____a) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.
_____b) I like to decide for myself what I want to do.

54._____a) I like to decide for myself what I want to do.
_____b) I want my mother or father, or some big person, to be there when I get home from school.

55._____a) I want people to do what I tell them.
_____b) I want to do things that will make people know I am doing something important.

56._____a) I always enjoy doing things that are going to be good.
_____b) I like to decide for myself what I want to do.

57._____a) I always enjoy doing things that are going to be good.
_____b) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.

58._____a) I am happy when people ask me to join them.
_____b) I always enjoy doing things that are going to be good.

59._____a) I want to be able to do things on my own.
_____b) I want to speak like most other people.

60._____a) I want people to do what I tell them.
_____b) I wish I could always be tops in everything.

61._____a) I am happy when people ask me to join them.
_____b) I like to decide for myself what I want to do.

62._____a) I like to have people tell me when I do something good.
_____b) I like to be able to do things better than others.

63._____a) I wish people paid more attention to things that I do.
_____b) I am happy when people ask me to join them.

64._____a) I want to talk very well.
_____b) I want to hear the sounds around me and know what people are saying.

65._____a) I want to talk very well.
_____b) I always enjoy doing things that are going to be good.

66._____a) When I get into trouble I like to know that someone will help me out.
_____b) I like to have people tell me when I do something good.

67. ______a) I want to be able to do things on my own.
______b) I want to be first or leader whenever we play games.

68. ______a) I want to speak like most other people.
______b) I like to be able to do things better than others.

69. ______a) I wish I could hear most things people say when they talk to me.
______b) I like to have people tell me when I do something good.

70. ______a) I like to decide for myself what I want to do.
______b) I like my friends to do what I tell them.

71. ______a) I want people to do what I tell them.
______b) I like to belong to clubs.

72. ______a) I am happy when people ask me to join them.
______b) I want to hear the sounds around me and know what people are saying.

73. ______a) I like my friends to do what I tell them.
______b) I want to talk very well.

74. ______a) I want to be first or leader whenever we play games.
______b) I want to speak like most other people.

75. ______a) I want to hear the sounds around me and know what people are saying.
______b) I like my friends to do what I tell them.

76. ______a) I always enjoy doing things that are going to be good.
______b) I want to hear the sounds around me and know what people are saying.

77. ______a) I want to do things that will make people know I am doing something important.
______b) I want to be able to talk as well as most other people.

78. ______a) I wish people paid more attention to things that I do.
______b) I always enjoy doing things that are going to be good.

79. ______a) I am happy when people ask me to join them.
______b) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.

80. ______a) I wish I could hear most things people say when they talk to me.
______b) I want to be first or leader whenever we play games.

81. ______a) I like to belong to clubs.
______b) I want to be able to do things for myself and not have to have help from other people.

82. ______a) When I get into trouble I like to know that someone will help me out.
______b) I want to speak like most other people.

83. ______a) I like my friends to do what I tell them.
______b) I wish people paid more attention to things that I do.

84. ______a) I wish I could always be tops in everything.
______b) I want to be able to do things for myself and not have to have help from other people.

85. ______a) I like to feel that someone older is around a lot so that I won't get hurt or sick.
______b) I like to belong to clubs.

86. ______a) I want to speak like most other people.
______b) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.

87. ______a) I want to hear the sounds around me and know what people are saying.
______b) I want my mother or father, or some big person, to be there when I get home from school.

88. ______a) It makes me feel good to know that people confide in me and tell me what they don't tell anyone else.
______b) I want to hear the sounds around me and know what people are saying.

89._____ a) I like to feel that someone older is around a lot so that I won't get hurt or sick.
_____ b) I want to do things that will make people know I am doing something important.

90._____ a) I go with my friends even if I don't like what they are doing.
_____ b) I want to be able to do things on my own.

91._____ a) I like to have people tell me when I do something good.
_____ b) I want to speak like most other people.

92._____ a) I like to decide for myself what I want to do.
_____ b) I wish people paid more attention to things that I do.

93._____ a) I want to speak like most other people.
_____ b) I go with my friends even if I don't like what they are doing.

94._____ a) I wish I could always be tops in everything.
_____ b) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.

95._____ a) I want to be first or leader whenever we play games.
_____ b) I go with my friends even if I don't like what they are doing.

96._____ a) Hearing is very important to me because it gives me the opportunity to appreciate the thoughts of others.
_____ b) I like to feel that someone older is around a lot so that I won't get hurt or sick.

97._____ a) When I get into trouble I like to know that someone will help me out.
_____ b) I go with my friends even if I don't like what they are doing.

98._____ a) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.
_____ b) I wish I could hear most things people say when they talk to me.

99._____ a) I want to be able to do things on my own.
_____ b) When I get into trouble I like to know that someone will help me out.

100._____ a) I wish I could always be tops in everything.
_____ b) I have to tell about myself to other people, and I want other people to tell me things about themselves.

101._____ a) I want to be able to do things on my own.
_____ b) I like to have people tell me when I do something good.

102._____ a) I wish I could always be tops in everything.
_____ b) I like to feel that someone older is around a lot so that I won't get hurt or sick.

103._____ a) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.
_____ b) When I get into trouble I like to know that someone will help me out.

104._____ a) I go with my friends even if I don't like what they are doing.
_____ b) It makes me feel good to know that others trust in me and tell me what they don't tell anyone else.

105._____ a) I go with my friends even if I don't like what they are doing.
_____ b) I like to be able to do things better than others.

106._____ a) I like to be able to do things better than others.
_____ b) I want to be able to do things on my own.

107._____ a) I like to have people tell me when I do something good.
_____ b) I go with my friends even if I don't like what they are doing.

108._____ a) When I get into trouble I like to know that someone will help me out.
_____ b) I want to be first or leader whenever we play games.

APPENDIX H

COOPERATING SPEECH AND HEARING CLINICS AND PUBLIC SCHOOL PROGRAMS

Cooperating Individuals	Location
Mrs. Hilda Amidon (and staff)	Hartford Board of Education Hartford, Connecticut
Dr. Asa J. Berlin	Outpatient Program Speech and Hearing Clinic The Pennsylvania State University
Dr. Asa J. Berlin (Consultant)	Williamsport Cleft Palate Clinic Williamsport, Pennsylvania
Dr. Asa J. Berlin	Summer Residential Clinic Speech and Hearing Clinic The Pennsylvania State University
Mr. William Dopheide	Speech Clinic Western Michigan University Kalamazoo, Michigan
Mr. Douglas Borst	Niles Public Schools Niles, Michigan
Mr. Milen C. Gray	Berrien County Board of Education St. Joseph, Michigan
Miss Peggy Wallace	*Springfield Community Schools* Battle Creek, Michigan
Mrs. Arletta B. Clark	Lebanon County Schools Lebanon, Pennsylvania
Mr. Eugene B. Cooper	Adult Therapy Program Speech and Hearing Clinic The Pennsylvania State University University Park, Pennsylvania
Mrs. Elizabeth C. Esber	Huntingdon County Schools Huntingdon, Pennsylvania

Cooperating Individuals	Location
Mr. Hubert Gerstman	Speech and Hearing Clinic The Pennsylvania State University University Park, Pennsylvania
Mr. Clifford N. Grine Mr. Harold V. Hartley, Jr.	Sharon Public Schools Sharon, Pennsylvania
Mr. George Haspiel Mr. David Luterman	Audiology Program Speech and Hearing Clinic The Pennsylvania State University University Park, Pennsylvania
Mr. George T. Herman	Juniata County Schools Mifflin Town, Pennsylvania
Mr. Paul Irzinski	Speech Therapist Fulton County, Pennsylvania
Mr. Albert F. Johnson	Berks County Schools Reading, Pennsylvania
Mr. Clifford J. Lake	Franklin County Public Schools Chambersburg, Pennsylvania
Mr. Raymond J. Lezak	Speech Clinic Genesco State *Teachers College* Genesco, New York
Mr. James M. McDonald	Ass't Supervisor Special Education Blair County Hollidaysburg, Pennsylvania
Dr. Eugene T. McDonald (Consultant)	Phillipsburg Cleft Palate Clinic Phillipsburg, Pennsylvania
Mr. Samuel P. Schilling	New Castle Public Schools New Castle, Pennsylvania
Miss Joan E. Schmale	Child Development Center West Chester, Pennsylvania

Cooperating Individuals	Location
Miss Irma Scott	Commonwealth Speech and Hearing Center Kline Valley Harrisburg, Pennsylvania
Mr. Crawford A. Sechler Mr. Thomas Zelinske	Clinton County Lock Haven, Pennsylvania
Dr. Bruce M. Siegenthaler (Consultant)	Blair County Society for Crippled Children and Adults Altoona, Pennsylvania
Miss Sandra Smathers	Blair County Society for Crippled Children and Adults Altoona, Pennsylvania
Dr. Roland J. Van Hattum	Kent County Board of Education Grand Rapids, Michigan
Miss Harriet K. Varner	Clairon County Public Schools Clairon, Pennsylvania
Miss Maude Brungard Mrs. Helen Breon Voltz Mr. Richard Mease Mrs. Marjorie Brown Mrs. Joan Glickstein	Centre County Public Schools Speech and Hearing Program Bellfonte, Pennsylvania
Mr. Metcalf (County Supervisor) Mr. Wagner (Principal) Mr. Fair (Guidance Counselor)	Belwood Antis School Belwood, Pennsylvania
Mr. T. E. Sones (County Superintendent) Mr. Roy S. Jamison (Supervising Principal) Mr. A. Brooks Coral (Principal) Mr. William Babcock (Principal)	Centre County Public Schools